Hospital Quality Star Ratings Public Comment Verbatim Responses

For Period Ending: 9/27/17

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/25/2017	Public Input Period	Enhancements of the Overall Hospital Quality Star Rating with the goal to improve the usability, accessibility, and interpretability of CMS's hospital quality website, Hospital Compare, for patients and consumers. LVHN appreciates CMS's efforts to re-evaluate the Overall Star Rating methodology to ensure hospital summary scores are more similar within each star category but different than summary scores in other star categories. LVHN is a large academic health network consisting of five full service hospitals, a children's hospital, numerous community health centers, and pharmacy, imaging, laboratory, and home-health and hospice services.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Public Input Period	We appreciate your attention to these matters of significance to our nation's hospitals and the public related to the Proposed CMS Star Ratings Methodology Enhancements.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/26/2017	Public Input Period	On behalf of our more than 135 member hospitals and integrated health systems, the Wisconsin Hospital Association (WHA) appreciates the opportunity to provide comments on the Centers for Medicare & Medicaid Services' (CMS) proposed enhancements to the overall hospital quality star rating.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Input Period	The Healthcare Leadership Council (HLC) appreciates this opportunity to submit comments on the Centers for Medicare and Medicaid Services' (CMS) approach to calculating hospital Star Rating scores and the overall Star Rating project.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report
9/27/2017	Public Input Period	HLC members appreciate the goals outlined in the August 2017 public input period.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report
9/27/2017	Public Input Period	On behalf of the 140 hospitals that make up the acute care membership of the Greater New York Hospital Association (GNYHA), we thank you for your dedicated work on the Overall Hospital Quality Star Ratings and for the opportunity to comment upon the enhancements you are considering for future iterations. We greatly appreciate the ongoing commitment by CMS and CORE to refine and improve the star ratings methodology and hope that our input is constructive.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Input Period	On behalf of the Adventist Health System (AHS), we appreciate the opportunity to comment on the proposed methodology enhancements for the Hospital Quality Star Rating or Overall Star Rating on Hospital Compare. Our organization includes 45 hospital campuses located across nine states and comprises more than 8,200 licensed beds. AHS provides inpatient, outpatient and emergency room care for four million patient visits each year. As AHS operates in a variety of settings, ranging from rural Appalachia to an urban teaching hospital in Florida, we believe that we can provide an objective and sound policy voice in response to the Hospital Quality Star Rating Proposed Methodology. Below, please find AHS' comments and recommendations. Specifically, we comment on the following issue areas: • Enhancements for the Overall Star Rating • Weighting of Measure Groups • Negative Loading • Public Reporting Thresholds • Future Areas of Re-Evaluation	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report
9/27/2017	Public Input Period	Thank you for the opportunity to participate in the comment and feedback process. Please consider a change.	Robert Raggi	Robert.Raggi@providence.org	Individual	Please refer to the Summary Report
9/27/2017	Public Input Period	The Federation of American Hospitals (FAH) is pleased to comment on the proposed methodology changes for the Medicare Hospital Star Ratings program.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Input Period	On behalf of our more than 400 member hospitals, the California Hospital Association (CHA) appreciates the opportunity to comment on the recently released report, Enhancements of the Overall Hospital Quality Star Ratings. CHA appreciates the opportunity to provide our comments on this specific report and looks forward to continued engagement with CMS on this important topic.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Public Input Period	The paper CMS released for public comment is a first step in making known some of the limitations of the methodology; we appreciate CMS' efforts in this area.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/1/2017	Overall Project	STAR ratings do not reflect the quality of care being given by my organization	Anne Shirah, MSN, RNC, CPHQ, *Director of Quality Services, Risk Manager, Patient Safety Officer,* Monroe County Hospital	ashirah@mchcare.com	Hospital	Please refer to the Summary Report

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9/18/2017	Overall Project	• I believe that the CMS star ratings are creating issues, the outcomes as which may not be known for years. • For Example: The question regarding Pain being controlled has pushed folks to believe that hospitals have created addicts. • I believe that stating that a hospital is a 1 star creates a burden and guilt on staff that is not justified. Nobody want to be considered a 1 star or perceived as giving 1 star care. • The turnover in Hospital Staff especially nursing due to burnout etc. is compiled in a hospital when a low star rating is received.	Tim Cerullo, *Market CEO*, Bayfront Health Port Charlotte and Punta Gorda	timothy.cerullo@bayfronthealth.com	Individual	Please refer to the Summary Report
9/18/2017	Overall Project	I would recommend eliminating the star rating system all together.	Tim Cerullo, *Market CEO*, Bayfront Health Port Charlotte and Punta Gorda	timothy.cerullo@bayfronthealth.com	Individual	Please refer to the Summary Report
9/27/2017	Overall Project	We strongly support CMS efforts to publicly report data in a way that is both useful and understandable to patients but also follows a valid and rigorous statistical process.	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report

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9/27/2017	Overall Project	We laude CMS's transparency and mission to use publically disclosed provider quality information to help promote the receipt of high-quality care by consumers and the improvement of care by providers.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Overall Project	Combining ratings across conditions and procedures obfuscates quality at the level of specificity that actually matters to consumers. Quality can vary widely across departments within an institution, and ignoring this nuance ignores the reality that a single score or rating may not accurately represent quality for all conditions or procedures at a single hospital. Even if it could, that is not what patients care about. Patients want to know about quality relevant to the specific care that they will receive.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Overall Project	The FAH had serious reservation about the initial Star Ratings methodology and concept. Hospital Compare and its measures were never intended to be displayed as composites reflecting a single overall score. Continuing to perpetuate the notion that a single graphic reflects all aspects of hospital care does a disservice to patients, their caregivers and the facilities being measured.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Overall Project	It is vitally important to hospitals, patients, their families and the overall national work on quality improvement and public reporting that any changes to the display of data by star categories accurately reflect the quality of care provided by hospitals to their patients.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Overall Project	In addition, our members believe it is extremely difficult to achieve a single graphical representation of hospital care using a limited number of variables and statistical constructs that by their nature have limits and may not reflect the overall care delivered in a hospital.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Overall Project	CHA and our member hospitals continue to support that meaningful, transparent and actionable data be made available to consumers and providers. However, we continue to encounter challenges in understanding and explaining the CMS hospital 5 star methodology to consumers and clinicians.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Overall Project	We respectfully request that CMS • Re-evaluate the appropriateness of an overall hospital star rating that oversimplifies the complex and individualized choices patients must make about their health; o Clarify how the hospital overall star rating system differs from existing star ratings for other providers, and should ensure the hospital ratings do not oversimplify a complex and individualized decision—a patient's choice of care—while potentially exacerbating disparities in care; o Re-evaluate the appropriateness of having one overall rating for hospital quality that does not take into account the individualized care choices of patients.	Michael R. Waldrum MD., MSc., MBA, *CEO*, Vidant Health	Daniel N. Van Liere Daniel.VanLiere@vidanthealth.com	Health System	Please refer to the Summary Report

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9/27/2017	Overall Project	The second assumption made by the Star Rating is that multiple facets of quality can be appropriately condensed into a single number from 1-5. We are concerned that such a reductive approach oversimplifies the complex business of delivering healthcare (see enclosed Georgetown University commentary). For example, care for high-risk conditions is consolidated in hospitals that have the capability to care for very sick patients. Hospitals which lack such capabilities can transfer their patients to the ones that provide more services, and often do so. There is inherent value in having centers with 24-hour cardiac catheterization labs, for example, or specialized oncology or neurosurgical care. Patients choosing hospitals based on a single-number Star Rating may be steered to hospitals that cannot provide the services they need, because they are choosing based on metrics that have little to do with their condition. The current Star Rating program, which we think fails both assumptions, could significantly mislead patients and consumers about hospital quality.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report
9/27/2017	Overall Project	While HANYS supports the public availability of hospital quality data, we have multiple concerns about the Centers for Medicare and Medicaid Services' (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 methodology changes, HANYS strongly urges CMS to remove the Star Ratings from Hospital Compare until additional analysis can be completed and communicated to the field	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/1/2017	Overall Methodology	My issue with the Star ratings is based on the use of the Confidence Interval to determine Star Ratings. A smaller hospital has a longer CI therefore making it more apt to have better Star Ratings. A larger hospital's CI is shorter and based on your current methodology is more apt to fall on the side of your median. Thank you for your consideration.	Karen Holland, RN, CPHQ (Director of Quality and Regulatory Compliance-Jackson Hospital and Clinic)	Karen.Holland@jackson.org	Hospital	Please refer to the Summary Report
9/25/2017	Overall Methodology	Even if CMS can improve the implementation of the current methodology, we continue to have significant concerns about the conceptual underpinnings of star ratings. The measures included in the ratings were never intended to create a single, representative score of hospital quality. Furthermore, the ratings often do not reflect the aspects of care most relevant to a particular patient's needs. For example, a family may be interested in selecting the best hospital for cancer care, but there are no such measures included in the current star ratings. Therefore, the AHA continues to urge CMS to explore alternative approaches to an overall star rating, including star ratings done by topic area such as patient safety, patient experience of care and cardiac care.	Ashley B. Thompson, *Senior Vice President & Public Policy Analysis and Development,* American Hospital Association	Akin Demehin 202-626-2365 ademehin@aha.org	Hospital Association	Please refer to the Summary Report
9/26/2017	Overall Methodology	WHA is very concerned about the complexity of the star rating method, the unreliability of the results and the inability of our members to use these ratings in a meaningful way. WHA has a long history of public transparency and every hospital in the state voluntarily reports quality measures and summary ratings on a WHA website. We support ratings that both benefit the public and are useful to hospitals in driving their quality improvement work.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report

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9/26/2017	Overall Methodology	CMS should reevaluate the use of the Latent Variable Model. It has been brought to our attention that SAS is unable to accurately and reliably handle the large volume of data used to calculate the ratings. It is our recommendation that CMS consider other software solutions or modify the method so the statistical analysis is thorough and correct.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/26/2017	Overall Methodology	**Base the star ratings on a more transparent, replicable methodology** The latent variable modeling approach currently used to calculate the Overall Star Ratings is highly technical and complex. We wonder how many hospitals have staff with the statistical knowledge to understand the methods used (e.g. measure loadings and standardized scores) and turn them into actionable improvement plans. We suggest Yale/CMS consider a more straightforward approach, based on applying consistent weights to each measure group and evaluating the weight calculations annually. We believe a simpler methodology that could be easily replicated by hospitals would enhance transparency and support hospitals in improving their performance on the Overall Star Ratings and component measures.	Elizabeth Mort, MD, MPH, *Senior Vice President of Quality & Safety and Chief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Hospital System	Please refer to the Summary Report

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9/26/2017	Overall Methodology	However, we have fundamental concerns, both from a theoretical and practical standpoint, of the application of latent variable modeling for the Hospital Compare data. VCU Health reviewed the May 2016, Overall Hospital Quality Star Ratings on Hospital Compare Methodology Report (v2.0) in great detail and found the information in Appendix E enough to question the use of latent variable modeling in general. For latent variable modeling to be applied, evidence of significant principal component factors with a high percentage of variance explained would be a strong indication that latent variable modeling should be used. However, six of seven measure groups indicate only one principal component or measure should be used (instead of all measures) and a low (less than 50%) percentage variance explained	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Overall Methodology	In particular, "Efficient Use Of Medical Imaging" group results indicated that no principal components were present and only marginal percentage variance was explained. Additionally, latent variable modeling application on measure groups where no 'latent' variable could or should be measured, such as mortality (either dead or alive), further calls into question the appropriateness of this technique.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/26/2017	Overall Methodology	From a practical perspective, latent variable modeling is difficult to understand and explain. Many providers who are attempting to use the Overall Star Rating as a guide for performance improvements have an extremely difficult time understanding and explaining why the loading coefficients change each quarter, and where they should focus their efforts. While VCU Health supports providing actionable information to providers and consumers to assist in their health care decisions, transparency and improving care must strike a delicate balance. Information should be readily available to patients for the purposes of improving quality in health care, expanding consumer engagement in health care decision-making, and to improve federal programs' administration of health care benefits.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Overall Methodology	Given the questionable application and the difficulty in interpreting results from latent variable modeling, VCU Health urges CMS to remove latent variable modeling from the Overall Hospital Quality Star Rating completely and instead, apply consistent weights for each measure and evaluate weight allocation annually. This would provide scoring stability and easier interpretation for hospitals and the public. VCU Health believes that meaningful transparency is essential for providers, patients and the public to make the best use of health care information.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/27/2017	Overall Methodology	we do not believe the current scores help consumers pick a high-quality hospital for specific conditions or procedures nor promote meaningful quality improvement across hospitals. In fact, in a value-based market where financial rewards are given only to the highest performers rather than providers that achieve high quality, defining quality based on a curve rather than a meaningful threshold will prevent some high-quality hospitals from being rewarded and could discourage hospitals from sharing best practices.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Overall Methodology	We believe that in order to achieve the goals set out by the program, the methodology should be revised to report at the level of the procedure or condition using measures that matter; utilize specific performance thresholds to define quality; and use the same measures when making comparisons across hospitals. We appreciate these are non-trivial changes that go well beyond the proposed enhancements, but believe they are necessary to achieve the stated goals of the program.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Overall Methodology	rating hospitals relative to each other (i.e. on a curve, implied by the latent variable models) fails to identify clinically meaningful definitions or thresholds of good versus bad quality. Consider a hypothetical uniform decline in quality across all hospitals; with the current scheme, this would not change their relative standing nor ratings. In such a scenario it would be sensible to assign a lower rating to all hospitals. Uniform progress (hopefully less hypothetical) should similarly be met with a uniform increase in ratings. This would not happen in the existing (or enhanced) curve-based measurement program. Stratification as described in our first point would not serve its intended purpose without a simultaneous move to a threshold-based scheme.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report

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9/27/2017	Overall Methodology	Moreover, the current methodology requires a certain percentage of hospitals in each of the 5 star levels. Therefore, even if all hospitals are improving and above a threshold of quality performance, there will always be those hospitals that fall into the one or two star category even though the quality of care they provide may not be meaningfully different from those in a higher category.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Overall Methodology	However, our member hospitals remain concerned about the overall hospital quality star rating system, including issues with its methodology and doubt about whether it accurately reflects the quality of care provided by essential hospitals. We urge the agency to suspend overall star ratings and mitigate flaws in the system's measures and methodology. This would prevent confusion among patients and providers and ensure a meaningful and accurate assessment of quality at hospitals nationwide.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Overall Methodology	The methodology, as currently described, does not make clear how extreme outliers were handled and how many extreme outliers were found? The details of the methodology also did not identify which statistical program was used to run the k-means cluster analysis, and the options chosen for the statistical procedure. Was it SAS or STATA or another statistical program? Our members with statistical expertise have suggested that the program and the procedure options chosen to run the calculation may make a difference and could influence the final calculation outcome and distribution. CMS should ensure that this information is transparent so that this analysis can be replicated by external stakeholders. The FAH also would appreciate greater detail on how many hospitals were very close to the demarcation lines dividing star levels. In other words, were there five or one hundred hospitals within 0.5 standard deviation of the demarcation line dividing the one-star from the two-star or four-star from three-star categories? The FAH would greatly appreciate CMS releasing the full distribution model.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Overall Methodology	1. Clustering algorithm is confusing to me. I may not understand it completely. Where is the mark that separates 5 star from 4 star etc….? 2. Methodology is very complex. It would be great to have resources to simplify the methodology on the QNET site.	Shelly Demello, RN, *Quality Management and CDI/Core Measure Manager*, Hilo Medical Center	808-932-2556 sdemello@hhsc.org	Individual	Please refer to the Summary Report

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9/27/2017	Overall Methodology	There are two components in developing aggregate quality scores: 1) the whether scores should be combined, and 2) the method used to combine individual measures into an aggregate score. While others may comment on the former, our comments here will focus solely on the latter and more specifically on the lack of applicability of the method the CMS has used for calculating aggregate scores – the latent variable model (LVM). Our comments here are largely from our prior analysis one this subject (http://jktgfoundation.org/data/An_Analysis_of_the_Medicare_Hospital_5-S.pdf). Below, we cite excerpts from our prior analysis in quotes and CMS should see the prior comments for the explanation of the relevant citations. The specific issues on which comments were solicited did not include the major deficiency on the 5 star rating system, namely, the inappropriate use of latent variable models. Several of the issues raised can be attributed to the use of a latent variable model. In particular, the fact that the Clostridium Difficile (C. Diff.) quality measure either appears with a negative or a very small positive coefficient is due to the use of a latent variable model with a single latent variable. C. Diff. is clearly an important measure of quality. The fact that it is given a negative or tiny weight in the rating is due to the implicit structure of the latent variable model, and the fact that C. Diff. measure is measuring a different aspect of the hospitals' quality than the other measures in that component. A latent variable model implicitly assumes that there is an underlying, unseen variable embodying the characteristic being studied, in this case the "quality" of the hospitals, and that the observed values of the various measures are projections, with noise, of this unseen variable. To the extent one of the observed	Theodore Giovanis, *President*, The Jayne Koskinas Ted Giovanis Foundation for Health and Policy (JKTGF)	tngiovanis@aol.com	Healthcare and Policy Foundation	Please refer to the Summary Report

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		variables is less correlated with the other observed variables it is assumed it is a less reliable indicator of the latent variable and so is assigned a lower weight. However, the less correlated variable may just be measuring a different aspect of quality, so assigning it a small weight is throwing away useful information. We believe this is what is happening with the C. Diff. measure in the 5 star rating system.				

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9/27/2017	Overall Methodology	The construction of a latent variable model requires an initial assumption that the observed or manifest variables (the initial quality measures in this discussion) are projections of linear combinations of unmeasurable underlying or latent variables. In this particular instance, it is further assumed that they are projections of a single latent variable. Thus, in the case of the mortality measures, it is assumed that there is an underlying mortality rate for each hospital, and the mortality rates for acute myocardial infarction, coronary artery bypass graft, chronic obstructive pulmonary disease, heart failure, pneumonia, and acute ischemic stroke are all derived from that overall mortality rate (along with a random error term). This is a far-reaching assumption, and unlikely to be valid. By combining the individual mortality measures in this way the methodology is throwing away a lot of information that is contained in the individual measures. It is quite a stretch to assume that a hospital that has a low mortality rate for pneumonia is going to also have a low mortality rate for stroke and cardiac problems, and vice versa. The results posted by CMS in their Updates and Specifications Report prove that this is a valid concern. Looking at the scree plots provided in Appendix E of that report, Figure E.2 (Safety of Care Group) shows that the (first) latent variable (principal component) captures less than 20% of the variance in the measures, and that even adding two more latent variables (or principal components) still captures less than 50% of the variance. An examination of the scree plots proportion of the variance explained should convince any informed and objective reader that a single latent variable is not adequate to capture the information in the individual quality measures.	Theodore Giovanis, *President*, The Jayne Koskinas Ted Giovanis Foundation for Health and Policy (JKTGF)	tngiovanis@aol.com	Healthcare and Policy Foundation	Please refer to the Summary Report

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9/27/2017	Overall Methodology	The individual quality measures within each of the 7 categories of measures are combined using "loading coefficients", which can be thought of as relative weights. Looking at the "Efficient Use of Medical Imaging" category, 2 of the 5 quality measures have small negative weights, and of the other 3 one makes up two thirds of the total. In other words, the measure for this category is being largely driven by a single quality measure – "abdominal CT use of contrast material". The Safety of Care category is also driven largely by a single measure – Complication/Patient Safety for Selected Indicators – which receives a loading coefficient of 0.93. The next highest loading coefficient in this category is only 0.17, and HAI-6, Clostridium Difficile, gets a loading coefficient of 0.001, so is contributing negligibly to the category score, but it is clearly an important measure from a patient perspective. These are additional indicators of the lack of appropriateness of a latent variable model in this context.	Theodore Giovanis, *President*, The Jayne Koskinas Ted Giovanis Foundation for Health and Policy (JKTGF)	tngiovanis@aol.com	Healthcare and Policy Foundation	Please refer to the Summary Report

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9/27/2017	Overall Methodology	In consideration of enhancements to make within the existing latent variable modeling framework, Vizient is supportive of the recommendation to use quadrature instead of "NOAD" for estimation. However, Vizient has fundamental concerns, both from a theoretical and practical standpoint, of the application of latent variable modeling for the Hospital Compare data. Vizient reviewed the May, 2016 Overall Hospital Quality Star Ratings on Hospital Compare Methodology Report (v2.0) in great detail and found the information in Appendix E enough to question the use of latent variable modeling in its entirety. For latent variable modeling to be applied, evidence of significant principal component factors with a high percentage of variance explained would be a strong indication that latent variable modeling could be used. However, six of seven measure groups indicate only one principal component or measure should be used, rather than all measures, and a low (less than 50%) percentage variance explained. In particular, the "Efficient Use Of Medical Imaging" group results indicated that no principal components were present and only marginal percentage variance was explained. Additionally, latent variable modeling application on measure groups where no 'latent' variable could or should be measured, such as mortality (either dead or alive), further calls into question the appropriateness of this technique.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Overall Methodology	From a practical perspective, latent variable modeling is difficult to understand and explain. Many providers who are attempting to use the Overall Star Rating as a guide for performance improvements have an extremely difficult time understanding and explaining why the loading coefficients change each quarter, and where they should focus their efforts. The current 'predicted over expected' approach unnecessarily complicates both the public's and provider's understanding of exactly how the actual 'observed' values impact the current ratio used to evaluate hospital performance. Currently, hospitals and providers see the only direct way of influencing the measure is to improve the administrative (documentation & coding) capture of those co-morbidities which count toward the predicted and expected value calculations. We believe this was an unintended result caused by using an overly complicated modeling technique. Given the questionable application and the difficulty in interpreting results from latent variable modeling, **Vizient urges CMS to remove latent variable modeling from the Overall Hospital Quality Star Rating completely; and instead, apply consistent weights for each measure and evaluate weight allocation annually. This would provide scoring stability and markedly easier interpretation for hospitals and the public.**	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Methodology Enhancements	1. Analytic exhibits showing the individual and joint effect of revised convergence, threshold re-sequencing and discontinued Winsorization are appreciated and clearly yield better distributional spread and enhanced reliability among 1-Star and 5-Star assignments than the current form of the methodology. The net benefit of this tradeoff makes sense given the arguably greater reputational effect of 1- and 5-Star ratings than 2, 3 and 4 Star assignments. 2. Initial work to replicate and further understand the collective effect of the proposed enhancements using data and SAS packs provided by CMS and Yale-CORE is included in appendix I. When compared with results based on current state methods that we've shared previously, associations between Star Ratings and measures of measure and domain availability are less pronounced. Associations between Star Ratings and select hospital and sociodemographic characteristics are somewhat less pronounced than those observed with the methodology in its current form, but still demonstrate substantial bias toward smaller organizations serving more advantaged populations.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Methodology Enhancements	Our analytic work yielded clear evidence of a systematic relationship between the number of stars awarded and sociodemographic status factors at both the hospital ZIP code and patient case-mix levels (Table 1). Many of the area-level SDS factors we evaluated share a monotonic relationship with the number of stars awarded in the direction previously hypothesized by opponents of the overall quality rating system. For example, there is a 154 percent difference in a standard socioeconomic deprivation index for the home ZIP codes of one- and five-star hospitals nationally. One-star rated hospitals, on average, are located in ZIP codes that are 44 percent nonwhite and 17.5 percent of the adult population holds less than a high school education, compared to five-star hospitals with home ZIP code populations that are 21 percent nonwhite and 10 percent of adults have less than a high school education. Compared to five-star hospitals, one-star providers show between a one-and-a-half a two-fold difference in both Supplemental Security Insurance ratio and disproportionate share hospital percentage. Another indicator of the social and economic contextual surroundings of hospitals' patients is the average amount of uncompensated care per claim— a signal of un- and underinsured payer mix. One-star hospitals faced an average $1,442 in uncompensated care per claim compared to just $411 for five star hospitals — a more than 3-fold difference.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/21/2017	Methodology Enhancements	The concern over systematic bias for larger hospitals also garners empirical support from the data. A significant relationship appears to exist between the number of stars awarded and both the number of reported measures (of 64). This potentially is an artifact of the weighted likelihood approach that increases factor loadings for measures with larger denominators. On average, one-star hospitals reported 54 measures vs. the 44 on average among five-star hospitals (Table 2). Further, measures of volume, urbanicity and case complexity each share a near-monotonic inverse relationship with the number of stars awarded.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/22/2017	Methodology Enhancements	In order to further understand the impact of enhancements proposed in Section 3.1, we evaluated the extent to which select hospital and sociodemographic characteristics vary among hospitals based on the estimated gain and loss of stars between current and proposed enhancements. These comparisons show numerous significant associations and are presented in Table 3 for consideration.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/22/2017	Methodology Enhancements	On behalf of Woman's Hospital: Yes, Woman's Hospital supports the described implementation changes in the future overall star rating release. Thanks for allowing the input to this process.	Cathy Griffiths, DNS, RNC-OB, *Vice President of Quality,* Women's Hospital	cathy.griffiths@womans.org	Hospital	Please refer to the Summary Report
9/25/2017	Methodology Enhancements	LVHN supports the enhancements to the Overall Star Rating methodology by applying the reporting threshold prior to k-means clustering, removing hospital summary score winsorization, and using complete convergence for k-means clustering resulting in a broader distribution of hospitals across the star rating scoring.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/25/2017	Methodology Enhancements	We are fine with CMS implementing each one of these updates: we think that consumers would find the star ratings more informative if hospitals were further spread out among the five star categories.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/26/2017	Methodology Enhancements	VCU Health urges CMS to reconsider publishing the Star Rating in October given the extent to which comments are being accepted regarding the methodology, weighting and inclusion of measures, and comparative analysis.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Methodology Enhancements	1. Should the updates described above be implemented in a future Overall Star Rating release? *Yes* 2. Does it make sense to limit the number of hospitals included in the clustering of hospitals for star assignments to those hospitals that will receive a star rating (meaning hospitals that meet the public reporting threshold)? *Yes* 3. Do you agree with removing the winsorization step from the methodology since these updates allow for a broader distribution? *Yes*	Rebecca Redding, MD, *Evidence Based Care Coordinator*, Randolph Health	Rebecca.Redding@randolphhealth.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Methodology Enhancements	After carefully reviewing both the paper and outside experts' analysis of some of the proposed changes, we have concluded that this methodology — even with the proposed refinements — does not achieve the goal of providing meaningful information to consumers or providers. As such, we urge CMS to remove the hospital star ratings until all comments are responded to and errors are addressed. In addition, we are concerned that CMS has allowed this important evaluation to be conducted by the same contractor who developed and implemented the 5 star methodology. While we agree that relatively few experts have the qualifications to fully evaluate the methodology that has been implemented, we believe it would be in the public's interest if external stakeholders were more involved in the evaluation. Going forward, we hope that CMS will consider other contractors for evaluations of any proposed changes.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	While we believe more work must be done in this area, we offer the following narrow set of comments on the specific revisions proposed. Most of the methodological changes on which CMS solicits comment would affect its latent variable model (LVM) and k-means clustering calculation approaches. Due to the complexities of these models, we limit our comments to those that are within our expertise for evaluation, but support the comments set forth by others including the American Hospital Association.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	Should the updates described above be implemented in a future Overall Star Rating release? Yes	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

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9/27/2017	Methodology Enhancements	Based on the information provided in the document and the associated analyses performed, I believe the changes proposed by the development team would strengthen the overall star ratings methodology.	Matt Austin, PhD, *Assistant Professor*, Armstrong Institute for Patient Safety and Quality; *Assistant Professor,* Anesthesiology and Critical Care Medicine; Johns Hopkins University School of Medicine	410-637-6263 jmaustin@jhu.edu	Individual	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	The star rating methodology should be transparent, understandable, and accurately reflect the quality of care provided in the facilities. In other words, the clusters should accurately reflect true differences in care. The current star rating methodology does not do this effectively. Therefore, any changes to the methodology must correct the current flaws and not create additional barriers to patients' understanding of the care provided in hospitals. Latent Variable Model: In the proposed changes to the star rating methodology, CMS seeks comment on moving from the current categorization system that uses a winsorization methodology to a new methodology based on k-means clustering complete convergence stating that k-means clustering creates a broader distribution of star ratings.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Methodology Enhancements	Since the Star Ratings were established, we have been very concerned about the inclusion of very small facilities in the k-means clustering process that assigns the overall ratings. Because of their lower number of potential cases, these facilities either perform exceptionally well or very poorly on quality metrics. The inclusion of these small facilities in the k-means clustering caused larger hospitals, who actually receive a published star rating, to cluster in the middle ranges. For this reason, we strongly support CMS' proposal to re-sequence the methodology so that public reporting thresholds are applied prior to k-means clustering. We believe this step will improve the interpretability of the star ratings by removing facilities who do not meet the volume requirements from the k-means clustering. Although we support the re-sequencing model as outlined in the proposal, we would ask CMS to also consider moving the application of public reporting thresholds to earlier in the methodology process. These smaller facilities can still influence the latent variable modeling, and it may be appropriate to remove them earlier in the Star Rating process. (BJC also believes that latent variable modeling is too opaque and perhaps inappropriate for this endeavor. We agree with the findings of the enclosed Georgetown University commentary and would encourage CMS to evaluate the robustness of the latent variable modeling approach, and consider reasonable alternatives). We also support CMS' proposal to apply complete convergence to the k-means clustering process. We believe this change makes sense in light of the re-sequencing proposal. In summary, we support CMS' proposal to move forward with re-sequencing the methodology to apply the public reporting thresholds before k-means clustering, and the use	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
		of complete convergence on the k-means clustering. We would ask CMS to consider moving the application of the public reporting thresholds to even earlier in the process and to evaluate the overall appropriateness of using latent variable modeling in the Star Rating.				
9/27/2017	Methodology Enhancements	Many of the issues raised by the proposed enhancements speak to underlying problems with the statistical robustness of the methodology with or without the enhancements. A robust ratings methodology should be immune to small variations in specification, e.g. winsorization, resequencing of reporting thresholds. Absent a specific theoretical reason to choose one variation over another, the extent to which these modeling choices change the distribution of ratings speaks to a model that reflects more the choice of methodology than the healthcare reality on the ground.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report

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9/27/2017	Methodology Enhancements	For example, comparing columns 2 to 3 and also columns 3 to 4 in Table A.1, it seems unlikely that these methodological choices ought to impact the absolute number of hospitals given a pristine rating, absent some change on the ground. Yet, they do impact the distribution dramatically, e.g. without enhancements, 2.29% of hospitals receive 5-stars, versus with enhancements, 10.75% of hospitals receive 5-stars.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	However, as currently constructed, the 5-star ratings are unlikely to achieve these goals for several reasons. Aspects of the August 2017 "Enhancements of the Overall Hospital Quality Star Rating" may well constitute marginal improvements on the existing methodology, but these changes do not address these underlying concerns	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	The AAMC supports the proposal to resequence the reporting thresholds prior to clustering. Setting the threshold prior to clustering will lessen the influence of hospitals that do not report enough measures or domains on the star ratings of other hospitals. The AAMC supports removing hospitals that do not report enough domains or measures so that hospitals are compared only to those hospitals that submit similar amounts of data.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Methodology Enhancements	We appreciate the request for feedback on these enhancements. However, we recommend that CMS provide additional data and model output statistics that would enable stakeholders to diagnose and understand the impact of these proposed enhancements and any future changes. This would promote transparency and enable stakeholders to make more meaningful recommendations on improving the methodology.	Janis M. Orlowski, MD, MACP, *Chief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	The AAMC appreciates the time and work on reevaluating the star ratings. However, we remain very concerned with the flawed methodology used to determine star ratings on Hospital Compare. The star ratings published on the website are inaccurate and misleading to consumers that are seeking hospitals to provide their care. Many of these concerns were previously highlighted by the AAMC's in comments to CMS and are also outlined below in this letter.	Janis M. Orlowski, MD, MACP, *Chief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	While each of the three enhancements initially have a reasonable rationale, I have concerns with the end result of instituting the combined enhancements. Specifically, the impact of the enhancements are noted in Appendix A, Table A.1. In regard to the aforementioned table, the following depicts the shift in one and five star ratings in deploying the enhancements (Figure 1): One of the primary concerns observed in Figure 1 is the dramatic rise in the rate of hospitals that are awarded a five star rating from the "default" to the implementation of all three enhancements. There is over a four fold increase in hospitals attaining a five star rating: from 2.3% to 10.8%. An initial impression is that the bar is being lowered to achieve the highest star rating.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Methodology Enhancements	I encourage CMS to perform analyses to compare the level of performance hospitals attain at the measure and composite level under the current method and under the combined enhancements. In the June 8, 2017 CMS Technical Expert Panel (TEP) meeting, I (John Bott) inquired if such analyses have been done. The response from Yale CORE was that while such analysis was done in developing the initial methodology, it has not been performed with these proposed enhancements	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	A second primary concern depicted in Figure 1 is a surprising shift in the distribution of one star and five star ratings. In the "default", "1 revision" and "2 revisions" there is a higher rate of one star hospitals compared to five star. One example of this shift is observing that the "default" method rates about one-third more hospitals in the lowest star rating vs. the highest star rating. However, this changes markedly in the "3 revisions" method where nearly twice as many hospitals earn the highest star rating compared to the lowest star rating.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	Given the rather truncated analysis we are offered in Appendix A, Table A.1, the reader has a very limited understanding of the impact of each enhancement, individually. Additionally we have no analyses as to the impact of the enhancements by hospital type (e.g. bed size, teaching status). I recommend CMS conduct further analyses to understand the impact of each of the enhancements, rather than only a view of the enhancements added cumulatively (1, 2, and 3 enhancements). Until such analyses are performed and shared with the public, I am unable to support the proposed three enhancements.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report

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9/27/2017	Methodology Enhancements	We commend CMS' resolve to improve the usability, accessibility and interpretability of Hospital Compare for patients and consumers. While we support CMS refining the Overall Star Rating, we have some general concerns and suggestions for their improvement for the reasons listed below.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report
9/27/2017	Methodology Enhancements	To further review the impact of the proposed changes, Vizient used the version of the SAS package input file (December 2016 SAS Package Resources) referenced in the call for comment to evaluate the enhancements, to model the proposed enhancements to the best of our ability based on how we understand the proposed changes would be implemented. Based on our analysis, we found that the distribution of the Overall Star Rating for all hospitals did shift as reflected in the graph below (Figure 2) As evidenced above (Vizient Graph 1), the proposed changes appear to achieve the overall goal of smoothing the distribution so that there are more one and five-star hospitals and fewer three-star hospitals, reducing the clustering in the middle of the bell-curve. However, our assessment of this shift in the rankings reveals that the cohort of Academic Medical Centers unduly bears the burden of the shift to more one and two-star rankings as seen in the chart (Figure 3) below.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Methodology Enhancements	We urge you to suspend the star ratings and remove them from Hospital Compare until these concerns are addressed. In doing so, we hope you will consider the suggested changes we have detailed below as well as other, expert feedback regarding the flawed methodology. Vizient generally agrees with CMS's recommendations to include multiple iterations for the K-means clustering process, thereby eliminating the need to conduct winsorization on hospital scores. Vizient ran its own simulations regarding the impact of outliers on clustering and found the iterative k-means approach did reduce outlier influence substantially. However, we are concerned that CMS has not provided sufficient cluster analysis results or outputs to effectively conclude that the proposed enhancements are appropriate for the data at hand. Additionally, CMS's simulated reliability and reclassification exercise did not provide enough reliable information to support the transition to the new approach. Therefore, Vizient strongly recommends that CMS provide statistical results – such as R-square, Pseudo F, CCC statistic, ANOVA, etc. – for researchers and statisticians to make fully informed recommendations on improving the methodology.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Methodology Enhancements	*Aurora agrees with all 3 questions CMS asked for input on.* 1. Should the updates described be implemented in a future Overall Star Rating release? 2. Does it make sense to limit the number of hospitals included in the clustering of hospitals for star assignments to those hospitals that will receive a star rating (meaning hospitals that meet the public reporting threshold)? 3. Do you agree with removing the winsorization step from the methodology since these updates allow for a broader distribution?	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report
9/10/2017	Complete Convergence	Regarding convergence with k-means clustering: I think the use of k-means is not appropriate for grouping the hospital summary scores. They are smoothly distributed by construction, and there aren't any natural breaks. If k-means is going to be used, it is essential to use multiple iterations of the algorithm to achieve convergence. Not doing so is a serious error, and I think the document improperly downplays the importance of this issue. A single iteration is not "recommended" by any authority.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report
9/20/2017	Complete Convergence	The rationale for the proposed transition from single-iteration to complete convergence is theoretically sound and would simultaneously improve the stability and reliability of cluster assignments. This also obviates the need for Winsorization, which some would argue is problematic on the grounds that it masks true variability and spread in the hospital summary scores computed in previous steps.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/25/2017	Complete Convergence	LVHN recognizes that complete convergence had higher reliability for the one- and five-star categories but concerns remain about the moderate reliability for the two-, three-, and four-star categories. LVHN continues to have reservations that the Overall Star Rating truly reflects a hospitals performance and quality of care when compared to similar hospitals.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Complete Convergence	The AHA supports CMS's proposal to run the k-means clustering analysis to convergence. The k-means clustering algorithm involves a repeated series of computations (each repetition being one "iteration") to find clusters that partition data (in this case, hospitals) into a specified number of groups (the five star ratings). Repeating this process until the best clusters are found is referred to as "running to convergence." Convergence ensures that each observation within a cluster is more similar to the other observations within that cluster than to observations in the other clusters. The program used by CMS/Yale-CORE stopped well short of the number of iterations needed to achieve convergence. As a result, incorrect conclusions were drawn about which hospitals should be assigned to which groups.	Ashley B. Thompson, Senior *Vice President & Public Policy Analysis and Development,* American Hospital Association	Akin Demehin 202-626-2365 ademehin@aha.org	Hospital Association	Please refer to the Summary Report
9/26/2017	Complete Convergence	VCU Health generally agrees with CMS's recommendations to include multiple iteration for the K-means clustering process, thereby eliminating the need to conduct winsorization on hospital scores	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/26/2017	Complete Convergence	We are concerned that CMS has not provided sufficient cluster analysis results or outputs to effectively conclude that the proposed enhancements are appropriate for the data at hand.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Complete Convergence	Additionally, CMS's simulated reliability and reclassification exercise did not provide enough reliable information to support the transition to the new approach. Therefore, we strongly recommend that CMS provide statistical results – such as R-square, Pseudo F, CCC statistic, ANOVA, etc. – for researchers and statisticians to make fully informed recommendations on improving the methodology.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Complete Convergence	The K-Means Clustering should be performed to ensure complete convergence and should be limited to only those hospitals that have met the public reporting threshold. This will prevent incomplete analysis and the statistical impact of hospitals that will not be reported.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Complete Convergence	CHA supports CMS' proposal to run the k-means clustering analysis to convergence. The k-means clustering algorithm involves a repeated series of computations (each repetition being one "iteration") to find clusters that partition data (in this case, hospitals) into a specified number of groups (the five star ratings). Repeating this process until the best clusters are found is referred to as "running to convergence." Convergence ensures that each observation within a cluster is more similar to the other observations within that cluster than to observations in the other clusters. The statistical program used by CMS/Yale-CORE stopped well short of the number of iterations needed to achieve convergence. As a result, incorrect conclusions were drawn about which hospitals should be assigned to which groups.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Complete Convergence	We support using multiple clustering iterations to achieve complete conversation and eliminating z-score winsorization.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Complete Convergence	AHS believes that multiple iterations in order to achieve convergence is a sound idea.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report
9/27/2017	Complete Convergence	CMS proposes to run the k-means clustering to convergence. The FAH supports this proposal. Running the program to full convergence should indicate clear or obvious demarcation points. If these clusters were not clear, how would CMS decide to assign hospitals to a particular cluster? What is the variation among clusters? Is the variation statistically significant? These are all questions that must be answered prior to implementation of the new methodology.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Complete Convergence	Conditional on using a k-means clustering algorithm, the proposed changes regarding convergence seem sensible. However, fitting a normally distributed continuous rating (i.e. the result of averaging the scores from the 7 domain-specific LVM's according to the domain weighting scheme) into 5 clusters is putting a round peg into a square hole.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/10/2017	Winsorization	Regarding Winsorisation of summary scores: As above, I think using k-means introduces more problems than it solves. If it is to be used, I don't think it really matters much whether the summary scores are trimmed. If pressed, I would say to remove the Winsorisation step to simplify the overall process.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report
9/20/2017	Winsorization	The rationale for the proposed transition from single-iteration to complete convergence is theoretically sound and would simultaneously improve the stability and reliability of cluster assignments. This also obviates the need for Winsorization, which some would argue is problematic on the grounds that it masks true variability and spread in the hospital summary scores computed in previous steps.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/22/2017	Winsorization	Yes, remove the winsorization step from the methodology.	Cathy Griffiths, DNS, RNC-OB, *Vice President of Quality,* Women's Hospital	cathy.griffiths@womans.org	Hospital	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/25/2017	Winsorization	Another winsorization option might be to widen the summary score thresholds by some amount (e.g. to the 0.25th and 99.75th percentiles) rather than removing this component entirely.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/27/2017	Winsorization	We support using multiple clustering iterations to achieve complete conversation and eliminating z-score winsorization.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Winsorization	Do you agree with removing the winsorization step from the methodology since these updates allow for a broader distribution? Yes	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/10/2017	Resequence of Reporting Thresholds	Regarding re-sequencing reporting thresholds: The document proposes removing some hospitals' summary scores before applying clustering instead of after. I don't think this really matters much, but I'm weakly in favor of the change. Suppose that a simple quintile rating was used instead of k-means. It would be odd to remove the non-reporting hospitals from the data after assigning the star ratings - the expectation that each rating category would have 20% of hospitals would be violated.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report
9/20/2017	Resequence of Reporting Thresholds	Resequencing the application of reporting thresholds is beneficial overall for three key reasons: 1) it is more transparent; 2) it eliminates some of the potential grouping bias arising from use of information from hospitals that do not meet the reporting threshold, which many would argue is not appropriate use of k-means clustering; 3) it increases distributional spread at the tails. Re-sequencing does not, however, address fundamental issues with current reporting thresholds, which will be addressed in later comments.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/22/2017	Resequence of Reporting Thresholds	Yes, the number of hospitals needs to be limited to those hospitals that are eligible for a star.	Cathy Griffiths, DNS, RNC-OB, *Vice President of Quality,* Women's Hospital	cathy.griffiths@womans.org	Hospital	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/25/2017	Resequence of Reporting Thresholds	LVHN appreciates the consideration of limiting the number of hospitals in the clustering of hospitals for star assignments to those hospitals that will receive a star rating (meaning hospitals that meet the public reporting threshold). The limitation is helpful for hospitals who want to compare their Star Rating results to peer hospitals; but it is not helpful to the healthcare consumer who may not understand the overall significance of publicly reporting hospital metrics, or understand why a hospital meets or doesn't meet the public reporting threshold.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Resequence of Reporting Thresholds	The AHA supports CMS's proposal to remove hospitals that do not meet the public reporting thresholds for measures from its k-means clustering analysis. Under the current methodology, CMS set reliability and validity criteria for a hospital to receive a star rating. Yet all hospitals, including those that fail to meet these criteria, are included in the k-means clustering analysis. These hospitals should not be included in the k-means analysis, as their presence in the data adversely affects the clusters (i.e., star ratings categories). This is inconsistent with accepted principles for conducting such analyses.	Ashley B. Thompson, Senior *Vice President & Public Policy Analysis and Development,* American Hospital Association	Akin Demehin 202-626-2365 ademehin@aha.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/26/2017	Resequence of Reporting Thresholds	Hospitals that do not meet minimum measure criteria for a star rating continue to influence the latent variable modeling and the Group Score calculations. Hospitals that tend to not meet the thresholds are smaller organizations that are susceptible to extreme variability in performance. For example, in mortality rates, where one or even zero deaths in a small denominator population could have a substantial (unintended?) influence on group score calculations for all hospitals, particularly if a substantial number of smaller hospitals are included in the data set. Instead, we suggest evaluating thresholds between "Step 2: Group Measures" and "Step 3: Calculating Group Scores", and only hospitals that are eligible to receive an Overall Star Rating on Hospital Compare should be included in the Group Score calculation	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/27/2017	Resequence of Reporting Thresholds	CHA supports the proposal to remove hospitals that do not meet the public reporting thresholds for measures from its k-means clustering analysis. These hospitals should not be included in the k-means analysis, as their presence in the data adversely affects the clusters (i.e., star ratings categories).	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Resequence of Reporting Thresholds	Exclude hospitals ineligible for a star rating at the outset and not simply before clustering.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Resequence of Reporting Thresholds	However, we believe the reporting thresholds should be applied before beginning the star rating calculation. Based on sensitivity analyses of the latent variable models, we observed that including hospitals ineligible for a star rating materially affects the measure group scores as well as the cluster parameters. So in order to produce scores that allow for a clean comparison of hospitals receiving star ratings, it is necessary to exclude hospitals ineligible for star ratings from the outset.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Resequence of Reporting Thresholds	Does it make sense to limit the number of hospitals included in the clustering of hospitals for star assignments to those hospitals that will receive a star rating (meaning hospitals that meet the public reporting threshold)? Yes	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report
9/27/2017	Resequence of Reporting Thresholds	We agree that the sequencing should be revised to limit the threshold earlier on in the process. AHS agrees that the number of hospitals should be limited to those that meet the public reporting threshold. This should be done prior to the estimation of the latent variable model. The hospitals that do not meet the threshold may be inherently very different from hospitals that meet the minimum requirements. To put smaller hospitals in the same estimation model as larger hospitals, teaching hospitals, hospitals treating more complex cases and specialty hospitals, would skew the group score. If these hospitals do not have any star ratings reported, they should not be present in the clustering process.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Resequence of Reporting Thresholds	Vizient has concerns with the newly proposed reporting threshold application of at least 3 measures in at least 3 measures groups to receive a star. Hospitals that do not meet minimum measure criteria for a star rating continue to influence the latent variable modeling and the Group Score calculations. Hospitals that tend to not meet the thresholds are smaller organizations that are susceptible to extreme variability in performance. For example, in mortality rates, where one or even zero deaths in a small denominator population could have a substantial, unintended influence on group score calculations for all hospitals, particularly if a substantial number of smaller hospitals are included in the data set. Instead, Vizient suggests evaluating thresholds between "Step 2: Group Measures" and "Step 3: Calculating Group Scores", and only hospitals that are eligible to receive an Overall Star Rating on Hospital Compare should be included in the Group Score calculation (see below diagram – Vizient Diagram 1). Additionally, while we support efforts to maximize the number of hospitals included in the Overall Star Ratings, we do not think it is appropriate or accurate to compare hospitals that do not report enough domains with those that report significantly more information. As such, we reiterate Vizient's previously stated recommendation from Section 3.1 which suggests that CMS employ the hospital threshold evaluation between Steps 2 and 3 of the Overall Star Rating process. Vizient encourages CMS to remove hospitals that do not report enough domains or measures so that hospitals are compared only to other hospitals that have submitted a comparable amount of information.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Resequence of Reporting Thresholds	While we recognize the importance of maximizing the number of hospitals included in the Overall Star Ratings, we are concerned that it is difficult to assess hospitals that do not report enough domains and problematic to compare them with hospitals for which there is more complete information reported on measures and domains Therefore, the AAMC supports removing hospitals that do not report enough domains or measures so that hospitals are compared only to those hospitals that submit similar amounts of data and for which there is more complete information. AAMC analysis of the ratings has confirmed that the lower the number of measures a hospital reported, the more likely a hospital is to receive a higher star rating. Hospitals that report the minimum number of measure groups (domains) are up to 5 times more likely to receive a 5-star rating, and about 5 times less likely to receive a 1-star rating. (see table)	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Resequence of Reporting Thresholds	HANYS supports the proposed re-sequence of the reporting threshold because it levels the playing field for comparison by reducing potential biases resulting from different hospital characteristics—in this case the varied numbers of reported measures. HANYS' analysis shows that hospitals that do not meet reporting thresholds, on average, have higher summary scores than their counterparts.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/10/2017	Quadrature	Regarding application of quadrature: The document isn't very clear about the actual change to the SAS code will be. I think it's important to do two things: (1) Update and correct the model specification in the methodology report. That report contains only a single paragraph describing the model, and that paragraph doesn't even define all of the variables. (2) Post the proposed SAS code, and explain how it connects to the mathematical model. The SAS code that's currently on the QualityNet site (link) has little connection to the model in the methodology report. (There are no logarithms in the report, for example) Once the model and SAS code are properly documented, then the question of what approximation technique (or whether one is actually needed - is there a proof that there is not an analytic solution?) should be used can be answered. Currently it's not clear what the SAS code is actually computing, and this undermines confidence in the entire star rating project. I wouldn't accept the current code for a student project, let alone for something as important as guiding health care decisions. After seeing the problems with the k-means clustering, I think each SAS function call should be documented and its parameters explained (as well as what the default parameters are). This would be standard practice for annotating computer code. This section represents my strongest request. Hospitals should be able to understand how they're being rated and how they can improve. Having to reverse-engineer an underspecified mathematical model and a poorly-documented computer program is wasteful and disadvantages small hospitals that don't have statisticians and data scientists on staff.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Quadrature	The rationale for the proposed application of iterative adaptive quadrature based on empirical Bayes means and variances is technically sound and theoretically would result in more stable estimates. Analytic exhibits demonstrating the practical impact of this change are, however, not presented so feedback based on full evaluation is not possible.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/25/2017	Quadrature	LVHN does not have concerns in optimizing the approximation of the integral, the latent variable modeling solution, by adding a specification to require XTOL = I 01'-5 as the relative parameter convergence criterion, or the use of adaptive quadrature, using the empirical Bayes means and variances, updated at each iteration to essentially shift and scale the quadrature locations during calculation. We appreciate that testing has been done in prior reporting periods and that this will yield improvements in the stability of hospital measure group scores, and ultimately improve the reliability of hospital star rating classifications.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Quadrature	We support the use of adaptive quadrature and agree that this step would increase model convergence	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/26/2017	Quadrature	In consideration of enhancements to make within the existing latent variable modeling framework, we are supportive of the recommendation to use quadrature instead of NOAD for estimation.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/27/2017	Quadrature	GNYHA supports the proposal to update the relative parameter convergence criterion and to use adaptive quadrature to ensure stable and accurate estimation.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Quadrature	While I believe the proposed change makes conceptual sense, but before I can fully assess this change, I would be interested in seeing the empirical analyses of how this change impacts hospitals' ratings.	Matt Austin, PhD, *Assistant Professor*, Armstrong Institute for Patient Safety and Quality; *Assistant Professor,* Anesthesiology and Critical Care Medicine; Johns Hopkins University School of Medicine	410-637-6263 jmaustin@jhu.edu	Individual	Please refer to the Summary Report
9/27/2017	Quadrature	Are there any concerns with making this technical modification to the methodology? *Aurora has no concerns with this technical modification*	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Quadrature	CMS also proposes to technically modify the latent variable models that compute scores for each measure group. The Star Ratings development team believes this change will improve the stability of hospital measure group scores. HANYS urges CMS to allow an independent third body to review and verify the appropriateness and accuracy of the latent variable methodology, as well as of the k-means clustering methodology in the above step.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Quadrature	This section notes *"The development team has tested this improvement … and believes this improvement will yield improvements…".* I am unable to express concern nor support for this change without CMS sharing the aforementioned testing results. It is disappointing that not only that such testing results are not being publicly shared to inform one's position on the matter, but also this was not presented to, nor discussed with, the CMS star rating TEP. I encourage CMS to be more transparent with its work so as to allow for the public and the TEP to provide more informed and meaningful contributions in the review and comment period.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/10/2017	Measure Group Weighting	Regarding weighting of measure groups: The document proposes some different weights for the measure groups. While I think it makes sense to make "Effectiveness of care" more important than "Efficient use of imaging," I also think the separation of measures is an unnecessary and awkward component of the star rating process. That is, the latent variable model seems like it might be useful for avoiding subjective assumptions about which measures are the best indicators of quality. Why add a step that needs to make a determination about how much worse mortality is than timeliness? There can be no correct answer.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Measure Group Weighting	1) Greater emphasis on mortality, care effectiveness and timeliness of care measures makes good sense from the perspective of the patient. Alternative #2 accomplishes this more effectively than Alternative #1 and current weighting. 2) In previous comments (see appendix II) we've raised numerous concerns with Safety of Care and Readmission group measures given numerous questions about the validity of constituent measures and the absence of adjustment for social determinants that are clearly associated with measures in these groups. Alternative #2 is favored vs. Alternative #1 and current weighting because it places less emphasis on these domains. 3) In general, weighting of measurement groups should be undertaken in part based on clear evidence about the reliability and validity of measure groups as a whole as a basis for grouping providers. Derivation of latent variables in the current form of the methodology doesn't clearly establish the validity of measure groups as a meaningful basis of classifying providers or of even effectively summarizing the information available on Hospital Compare. Previous work by Hu et al (see appendix III) shows low within- and between-group correlations among item measures on Hospital Compare that casts doubt on the validity of any construct that would attempt to summarize them.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/25/2017	Measure Group Weighting	Healthcare consumers should ultimately determine which outcome measures hold the most importance based on their individual preferences, values, and healthcare needs. LVHN agrees that outcome measures hold more importance than process measures; however, many process measures are considered a leading indicator with an intent to influence an outcome, or a lagging indicator. The process intended to influence an outcome is the responsibility of healthcare providers. A healthcare provider cannot always assume the responsibility for an outcome because there are too many other variables to consider. Therefore, LVHN favors increasing the weights of process measures and decreasing the weights of outcomes groups in the current approach. We encourage further exploration into an alternative distribution of measure group rates to avoid penalizing hospitals for outcomes that may be out of their control.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report

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9/25/2017	Measure Group Weighting	We propose an alternative weighting system that assigns higher importance to the process measure groups: We consider Mortality and Patient Experience to be the ultimate patient outcomes and thus agree with Alternative #2 in that these components (i.e. a patient's own life and personal experiences to improve/maintain their health) should contain the highest weights. We also believe that Safety of Care and Readmission are proponents to achieve these ultimate outcomes and thus agree that these components (i.e. avoidance of adverse events and deliverance/education of the proper care to avoid unnecessary readmissions) should be weighted slightly lower compared to Mortality and Patient Experience. However, we propose that all three process measure groups (Effectiveness of Care, Timeliness of Care, and Efficient Use of Medical Imaging) be weighted much higher than their current weights with the goal of assuring safe and proper care across the whole healthcare spectrum. We believe that a hospital's performance on inpatient outcomes is highly-interrelated with their quality of outpatient/emergency care: optimal patient outcomes can only be achieved by establishing processes that focus on effective and efficient care delivery. For example, hospitals that more-quickly admit and treat their emergency patients as inpatients may correspondingly experience lower 30-day mortality and/or readmission rates due to fewer care delays. Also, hospitals that assure that their outpatients receive appropriate colonoscopy follow-up instructions may prevent future inpatient mortalities and/or safety events related to additional hospitalizations for undiagnosed colorectal cancer. For Efficient Use of Medical Imaging in particular, CMS has previously encouraged accountability for appropriate imaging utilization, noting the need for	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report

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		beneficiary and provider education about the risks associated with radiation: "…the quality and safety of outpatient imaging services are critically important… the Outpatient Imaging Efficiency (OIE) measures are important for public reporting because of the health risks and financial implications associated with use of imaging procedures in the Medicare beneficiary population" (Ref. 1).				

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9/25/2017	Measure Group Weighting	In conclusion, it is essential that the Overall Hospital Quality Star Rating program fully encompass both inpatient and outpatient care with the realization that positive inpatient outcomes and experiences are eventually dependent on the proper implementation of numerous processes along the way. If Effectiveness of Care, Timeliness of Care, and Efficient Use of Medical Imaging remain at their current low weights, it suggests that these process measure groups are relatively inconsequential within the wider context of ongoing hospital quality improvement efforts. This is neither accurate nor do we believe this is CMS' intention, since the goal of public reporting is to provide understandable information for consumers to make informed healthcare decisions.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/25/2017	Measure Group Weighting	The AHA urges CMS to use a more empirical approach to measure group weightings. CMS has framed its choice of weights as a "policy decision." Yet, as noted in the expert analysis the AHA commissioned in 2016, these decisions have enormous influence on the star ratings that hospitals receive. Moreover, it is unclear to what extent CMS's choices were informed by any systematic assessment of patients and family preferences. To implement a less arbitrary and more patient-centered approach, we recommend that the agency survey patients and families to obtain a statistically significant sampling of views about how to weight the measure groups	Ashley B. Thompson, Senior *Vice President & Public Policy Analysis and Development,* American Hospital Association	Akin Demehin 202-626-2365 ademehin@aha.org	Hospital Association	Please refer to the Summary Report

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9/26/2017	Measure Group Weighting	**Adjust weighting of measure groups to favor outcomes over process** MGH recommends a weighting approach that emphasizes measures which are most meaningful to patients—outcomes---especially those with sufficient sample size and endpoint frequency at most hospitals, and with robust risk-adjustment. We support higher weights for Mortality and Patient Experience. We believe survival is an important measure of quality, and is a high priority patient concern for many conditions and procedures. We recognize there is a data lag with the mortality measures. Although it takes time to collect and clean mortality data, we believe it is worth the effort and ultimately results in valuable information for patients. We also believe Patient Experience measures are important indicators of quality, and these data are collected with high fidelity and reliability. MGH recommends reducing the weight of the Safety domain due to concerns about the reliability of data collection and inadequate risk adjustment. There is a high degree of variation in surveillance methods for hospital-acquired infections, which complicates consumers' ability to reliably compare infection outcomes across institutions. Furthermore, the risk adjustment methods for the infection measures do not adequately account for differences in clinical characteristics, resulting in higher standardized infection ratios for hospitals caring for the most clinically complex patients. Many of the outcome measures (e.g. CLABSI, CAUTI, readmissions) are not risk-adjusted for patient acuity or sociodemographic factors; this could adversely affect the star ratings of academic medical centers which serve the most medically complex patients. MGH is firmly committed to improving patient safety and	Elizabeth Mort, MD, MPH, *Senior Vice President of Quality & Safety and Chief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Health System	Please refer to the Summary Report

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		would support increasing the weight of the Safety domain if these underlying methodological concerns were addressed.				

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9/26/2017	Measure Group Weighting	We also recommend the removal of the efficiency measures, which do not appear to add value to the overall model, and are not meaningful to patients. We support CMS's approach for moving away from process measures and toward outcomes in the Overall Star Ratings. Our proposed weighting approach is summarized in the table below, which emphasizes survival and patient experience as the most important measures to patients. Of the weighting schemes proposed by CMS, our preference would be for Option 2.	Elizabeth Mort, MD, MPH, *Senior Vice President of Quality & Safety andChief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Health System	Please refer to the Summary Report
9/26/2017	Measure Group Weighting	1. Do you have a preference between the current and alternative weightings? *I prefer Alternative #1 as I believe Safety should have greater or equal weight than Patient experience. Safety is much more objective than Patient Experience and less easily affected by "marketing" strategies like "High Five" etc.* 2. Would you propose an alternative distribution of measure group weights? *I would propose Alternative #2 but with the outcomes of Readmission and Patient Experience carrying the lesser 15% weight*	Rebecca Redding, MD, *Evidence Based Care Coordinator*, Randolph Health	Rebecca.Redding@randolphhealth.org	Individual	Please refer to the Summary Report
9/26/2017	Measure Group Weighting	VCU Health recommends a weighting approach that reflects placing more weight on groups with more currently available data and measure groups that contain measures that are clinically specific. Also, it is important to VCU Health that the measure weightings align with other CMS programs such as Value-Based Purchasing.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/26/2017	Measure Group Weighting	If this is not possible, Alternative #2 in Table 3 below is preferable. VCU Health highly suggests reducing the Safety measure group weight due to the delayed measures such as PSI-90 and THK complications, and recommends the same approach be mirrored in VBP as a result of such delayed measures.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Measure Group Weighting	Additionally, inclusion of non-significant factors in the model calls into question the use of not only that individual measure in the group calculation, but also the effectiveness of the model to consistently identify measures of importance with any reliability. Thus, VCU Health strongly urges discontinuation of the latent variable modeling approach, and encourages the use of a standardized weighting for each measure included in the rating	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Measure Group Weighting	VCU Health recommends CMS consider assigning individual measure weights within each measure group based on timeliness of the data (higher weight on more currently available data, lower weight only older data) and clinical relevance (higher weight on NHSN measures, lower weight assigned to PSI-90 and THK measures).	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Measure Group Weighting	Once these weights are assigned, percentage of data completeness can be determined. For instance, hospitals included in scoring and reporting must report on at least 70% of measures within a given measure group, across five of the seven measure groups. These thresholds ensure that hospitals with adequate data are used in the scoring and reporting.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/26/2017	Measure Group Weighting	WHA supports the re-weighting of measure groups to the Alternative #1 proposal. This is better aligned to CMS projects aimed at improving patient safety and effectiveness of care. It also changes the relative weight of the Efficient Use of Medical Imaging category hat uses measures calculated from Medicare claims. Our members do not find these measures to be relevant or usable.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Group Weighting	Since these weights are critical to the determination of the star ratings, the AAMC asks that CMS justify the weights for each category based on the integrity of the measures and the importance of that particular category overall in determining the hospital's performance.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Group Weighting	AAMC recommends that higher weight be given to the Mortality measure group since these outcome measures are of high importance to patients. We recommend lower weights for the Safety of Care and Readmission group measures given numerous concerns with the validity of these measures and the lack of adjustment for social determinants associated with these measure groups. The Table below includes AAMC's suggested weighting approach, which places more emphasis on measures that are meaningful to the patient.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Group Weighting	The current weighting is superior in comparison to "alternative 1" and "alternative 2" presented. A key issue with the alternatives is they both increase the weight of "effectiveness of care" and "timeliness of care" in comparison to the current method. Consumers consistently state they are more interested in outcomes of care vs. processes of care. The current weighting better reflects the target audience's preference, which is consumers.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Measure Group Weighting	Increase the weight for the mortality group in the overall star rating. CORE is considering changing the weights assigned to the measure group scores to derive an overall score. This is a vexing issue because the choice of weights is not empirically-driven but rather policy-driven. One of CORE's guiding principles is to align the weights with Hospital Compare, CMS's performance-based payment adjustments, and input from the Technical Expert Panel (TEP). Yet these give conflicting signals. For example, Hospital Compare includes dozens of process measures and apparently some members of the TEP support doubling the process groups' weights. However, none of CMS's performance-based payment adjustments will reflect process measures as of Federal fiscal year (FY) 2018. Further, CORE and perhaps the TEP view the Medicare spending per beneficiary (MSPB) measures as non-directional, yet CMS believes they are directional—with lower spending indicating better efficiency—and is giving them 25% of the Hospital Value-Based Purchasing (HVBP) total performance score as of FY 2018. Because there is no empirically correct way to weight the measure group scores, we would prefer to forgo calculating overall scores altogether. However, given that CMS is committed to providing overall star ratings, we will weigh in on this issue. The following table shows the seven measure groups, the current weights for each group, the two sets of alternative weights that CORE is considering, and a third set of alternative weights and that we propose for your consideration, which is somewhat of a hybrid of the two alternatives. We discuss our reasoning below.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Group Weighting	In contemplating the weights, the first thing we did was reorder the measure groups according to our conception of domains, which is not based on the type of measure, but rather on the aspect of performance being measured. Thus, we mapped the mortality, safety of care, effectiveness of care, and timeliness of care groups into a quality domain; the readmission1 and efficient use of medical imaging groups into an efficiency domain; and the patient experience group into its own domain. Then we considered the aggregate weight for each domain: The quality domain currently accounts for 52% of the overall score and the two alternatives would increase it to 56%. We would round that proportion up to 60% in order to give more weight to the mortality group. We think mortality merits 30% of the overall score because it is probably the most important aspect of care to consumers and because the mortality scores are currently the least correlated with the overall score among the four principal measure groups. Regarding the process measures, we would leave their group weights roughly where they are (rounded to 5%), which is between the alternative proposals of 8% and their zero weight in the HVBP program. That would leave 20% for the safety of care group, as proposed in the first alternative. We would not give more weight to the patient safety group than 20% because we believe the PSI-90 scores, which dominate the group, are the most compromised of the outcome measures by the practice of giving low-volume hospitals average scores (via the reliability adjustment) rather than excluding them since their performance is not truly average, but rather incalculable.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Group Weighting	- The efficiency domain currently accounts for 26% of the overall score and both alternatives would decrease it. We recommend 20% to equally weight the efficiency and patient experience domains, and we would confer 15% to the readmission group (as in the second alternative) in order to maintain 5% for the medical imaging group. The patient experience domain would represent the remaining 20% of the overall score (as in the first alternative). We do not believe it merits a higher weight than 20% for two reasons. First, it picks up the most weight when star-rated hospitals don't have scores in the other measure groups. In fact, we believe this may be why the patient experience scores are the most correlated with the overall star ratings, which we will research further. And second, we have a long-standing concern that the scoring method for the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is inherently biased against safety net hospitals. While it controls for patient mix, it does not control for the hospital-level disparity in financial resources between safety net hospitals and hospitals that treat few poor and (1 We mapped the readmission group to the efficiency domain because of the 30-day window. If the window were shorter, say seven days, we think readmissions could map to either the quality domain (as a reflection of missing or inappropriate care during the initial admission) or the patient experience domain (as a reflection of poor care coordination). Since the window is 30 days, however, we think readmissions are a potentially valid measure of hospital efficiency—i.e., efficient use of the inpatient setting versus the observation or ambulatory setting—or a valid measure of quality, access, and/or care coordination in the community or a residential facility.) uninsured patients. This	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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		resource disparity, which is beyond the hospitals' control, causes disparities in capital infrastructure and staffing levels, which highly influence patient experience.				
9/27/2017	Measure Group Weighting	My preference for weighting would either be to keep the current weighting or transition to the weights illustrated in Alternative #2 in Table 3.	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Measure Group Weighting	AHS believes that the current weighting system can distort the results. The proposed Alternative #1 would be the best option to most fairly distribute the weighting of measure groups, and would keep those measures of greater importance at a higher weight. We recommend changing the redistribution of the weighting when a hospital does not have any measures in one or more of the measure groups. This would limit the possibility of increasing the weight for a group that is reflecting performance for less than two measures. Several examples of past data show that hospitals with only three reported domains need an above average performance in one domain to receive a five-star rating. However, hospitals with all domains reported need an above average performance in at least three domains to receive the same rating. This is partly due to reweights, and partly due to lower thresholds. In other cases, hospitals that report all seven domains have higher or equal performances in the same categories as hospitals that report only three domains and that receive a lower rating. This occurs because of the weight adjustment. We believe that when a hospital has a group(s) with no measures, that weighting percentage should be redistributed only to the measure groups that have three or more measures. Measure groups with less than two measures would keep the standard weight. For example, the table below depicts how the 22 percent from the Patient Experience measure group is redistributed to only three other groups.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Measure Group Weighting	I would propose a change to the measure group weighting scheme. One framework CMS may want to consider is to give equal total weight to the outcome measure groups (50%) and the process measure groups (50%). This is framework that Leapfrog uses for its composite score. Ideally, CMS would want to adopt a weighting framework that can adapt as measures come and go from the score. In this proposal, each of the three outcome measure groups (mortality, safety of care, readmission) would receive equal weightings of 16.6%. For the process measure groups, I would recommend a lower weight for Efficient Use of Medical Imaging (5%) and then give equal weights (15%) to the remaining three measure groups (patient experience, effectiveness of care, timeliness of care).	Matt Austin, PhD, *Assistant Professor*, Armstrong Institute for Patient Safety and Quality; *Assistant Professor,* Anesthesiology and Critical Care Medicine; Johns Hopkins University School of Medicine	410-637-6263 jmaustin@jhu.edu	Individual	Please refer to the Summary Report
9/27/2017	Measure Group Weighting	We prefer Alternative #2 Yes. Decrease 5% from Patient Experience in Alternative #2, and redistribute to Effectiveness of Care, Timeliness of Care and Efficient Use of Medical Imaging. See our suggestion below	Robert Raggi	Robert.Raggi@providence.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Measure Group Weighting	The CMS proposal seeks comments on weighting of measure groups. The FAH believes measure group weights should be driven by a clear analytical approach, which includes patient and caregiver preferences. In July 2016, Dr. Francis Vella, Chair of Economics at Georgetown University conducted a study where the results indicated the weighting of the groups have a significant influence on the star ratings. The FAH encourages CMS to seek patient, family and caregiver input on the weighting of measures with a particular focus on the categories of measures that would be most helpful to them in making decisions about their care. A statistically sound assessment of what patients and caregivers find helpful would better inform the weighting of measure groups.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Group Weighting	1. Do you have a preference between the current and alternative weightings? *Aurora supports Alternative #1 in Table 3. We agree with the panel members advocating for higher weights of Effectiveness of Care and Timeliness of Care* 2. Would you propose an alternative distribution of measure group weights? *Aurora would leave this to administration based on their experiences with all measures* 3. If modified, what process should be used to determine new weights? *Aurora feels that continued feedback from expert panels and the public should help shape this, while keeping in mind what hospitals have control over, as well as what items incentivize hospitals to do the best thing for their patients.*	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report

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9/27/2017	Measure Group Weighting	Vizient recommends a weighting approach that reflects placing more weight on groups with more currently available data and measure groups that contain measures that are clinically specific. While Vizient certainly supports higher weights associated with outcome measures such as Mortality and Readmissions, the data delay for these measure groups is substantial. Data that is two years old does not accurately reflect the current performance of hospitals and does not provide an actionable measure for hospitals to use to improve quality performance; therefore, we would suggest a lower weight to the Mortality and Readmission measure groups. Also, placing increased weights on these measure groups containing two-year old performance data is misleading to the public by not accurately reflecting the current performance, or as close to current performance data as possible, for measures that are highly visible and of high importance to patients. Additionally, Vizient supports higher weights for Patient Experience, Effectiveness of Care and Timeliness of Care groups. The data for these measure groups is updated quarterly, and allows for organizations to make impactful changes in a timely manner. Vizient suggests a slight reduction to the Safety measure group weight due to the data delays associated with PSI-90 and THK complications. Relative to other measure groups, CMS should continue to assign a higher weight to the Safety measure group in order to recognize the more timely and clinically relevant National Healthcare Safety Network (NHSN) measures. The below table contains Vizient's suggested weighting approach, which places an emphasis on outcomes with more currently available data and on measure groups with clinically reviewed measures:	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Measure Group Weighting	Should CMS elect to use more timely data for the Mortality and Readmission measures or to discontinue problematic measures such as PSI-90, Vizient would re-evaluate this proposed weighting to reflect those additional changes. As previously noted, Vizient encourages CMS to rely on consistent measure and measure group weighting that is updated on an annual basis.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report
9/27/2017	Measure Group Weighting	We appreciate CMS' willingness to consider changes to the weighting of measure groups. We agree with and support CMS' desire to more heavily weight groups that contain outcome metrics, as opposed to process or structural measures. However, BJC also believes that the current outcome metrics are not properly risk adjusted. It is possible, under the current Star Rating methodology, that hospitals who serve the sick are unfairly punished. As CMS continues to assess the weighting of measure groups, we would ask it to consider that measures are appropriately risk adjusted so that hospitals who take care of the most sick, and complex, patients are not unfairly punished in the Star Rating. We would ask that CMS ensure appropriate risk adjustment for outcome metrics as it evaluates the weighting of measure groups in the Star Rating.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/10/2017	Negative Loadings	Regarding negative loadings: I think the document improperly downplays the effect of negative loadings, and doesn't offer a conceptual defense for including them. It could be the case that a higher quality hospital performs worse on some metrics. For example, suppose a great hospital is located next to a nursing home and that a terrible hospital is located next to a college campus. It could be the case that the great hospital has worse "mortality" stats than the terrible hospital. Is that actually the effect being captured by the star rating procedure? Looking at the HAI-6 measure, which is negatively weighted in each of the given analysis periods, I doubt it. It's implausible that an infection associated with poor hand washing practices is actually a sign of quality. I think it's more likely that the negative loadings are indeed "problematic with respect to face validity," and call into question whether the latent variable model is actually producing useful output.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report

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9/20/2017	Negative Loadings	1. Neither proposed approach truly addresses the fundamental challenges raised by the presence of negative and non-significant near-zero loadings observed for select measures. 2. Classic measurement theory suggests that the small and negative item loadings presented are likely indicative of a fundamental problem with the extent to which the derived latent measure summarizes constituent items. A small, near-zero loading indicates that the derived group measure doesn't effectively reflect item variance and violates the assumption of unidimensionality (i.e. that a single latent measure can effectively represent the variance in constituent measures it summarizes). This essentially means that the information in the item is not represented in the summary measure for its assigned group, which is problematic because it fosters a false assumption that the summary measure reflects information in the item when that is not the case. 3. In order to address this issue and ensure that Overall Star Ratings meet the stated aim of summarizing targeted measures, an extension of measurement models to include additional latent variables to effectively reflect the true dimensionality in targeted measure group domains is needed. 4. Short of deriving additional latent variables, measures with consistently low, near zero and non-significant item loadings should be removed from consideration in single dimension latent variable models.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/25/2017	Negative Loadings	The latent variable model for each measure group produces a loading for each measure, which represents the degree of the measure's influence on the group score relative to the other measures included in the same group. Measures that are more consistent or more correlated within the group have a greater influence on the hospital's group score. A negative loading indicates that an individual measure is in a reverse relationship with the latent variable compared with most other included measures. As such, hospitals with higher summary scores, or latent quality, are likely to have higher values on numerous positively loaded measures and lower values on the rare negatively loaded measures. Conceptually, this could mean that if two hospitals had identical performance on all but one negatively loaded measure, the hospital with higher (better) performance on that negatively loaded measure would have a lower summary score than the hospital with lower performance on that negatively loaded measure. Holding all other measure scores constant, the summary score for these two hospitals would be very similar, unless the negatively loaded measure dominated the summary score. This scenario, while highly improbable, is problematic with respect to face validity. LVHN recognizes the concern that improvements on an individual measure may lower the hospital star rating, for which little empiric evidence exists but a theoretical possibility exists, or that removing one measure with a negative loading might cause a second that was previously positive to have a negative loading. We do not have any strong opinion whether or not statistically significant negative loadings should be removed, but we do agree that if removed, only measures with a statistically significant ($p<0.05$) negative loading should be removed.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/25/2017	Negative Loadings	We believe that negative loadings (even significant ones) should be retained to ensure technical consistency among the star ratings. As already discussed, removing negatively-oriented measures has the potential to affect factor loadings on the other positively-oriented measures. To us, cognitive dissonance should not be considered a valid reason to arbitrarily eliminate measures that disagree with preconceived notions of directionality and/or significance. On the other hand, since most measures have positive loadings anyway, we do not believe the overall ratings would be largely affected if negative loadings were excluded.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/25/2017	Negative loadings	The AHA urges CMS to remove measures with negative factor loadings from the LVM. Each measure in a group includes a "factor loading," which reflects the extent of a measure's correlation with the overall measure group score. Higher factor loadings indicate a stronger association with the group score. Negative factor loadings indicate an inverse relationship between the performance score and the group score. The methodology includes measures with negative factor loadings. For measures with negative factor loadings, hospitals that perform well compared to other hospitals will receive a lower LVM score (they are penalized), and hospitals that perform poorly will receive a higher LVM score (they are rewarded). This is exactly opposite of the intent of publishing performance data and assigning scores. CMS suggests that the impact of the negative factor loadings on the overall score is relatively modest, which we believe is a strong argument for removing them from the star rating system. If the measures do not have much impact, and the impact they do have is the opposite of what was intended, then there is no reason to keep the measures in the star rating	Ashley B. Thompson, Senior *Vice President & Public Policy Analysis and Development,* American Hospital Association	Akin Demehin 202-626-2365 ademehin@aha.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/26/2017	Negative Loadings	**Remove measures with negative loadings** As previously stated, MGH has serious concerns about the utility of the latent variable modeling approach and would prefer the Overall Star Ratings be revised using a simpler, more readily replicable approach. If CMS/Yale continues to use the latent variable approach, we suggest removing any measure with negative measure loadings. As described in the methodology document, measures with negative loadings result in hospitals with better observed performance on the measure receiving a lower performance rating due to the negative coefficient, which is counterintuitive and ultimately misleading to consumers.	Elizabeth Mort, MD, MPH *Senior Vice President of Quality & Safety and Chief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Health System	Please refer to the Summary Report
9/26/2017	Negative Loadings	I do not think measures with significant negative loading should be in the Overall Star Rating	Rebecca Redding, MD, *Evidence Based Care Coordinator*, Randolph Health	Rebecca.Redding@randolphhealth.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/26/2017	Negative Loadings	VCU Health has substantial concerns regarding CMS's use of latent variable modeling. We believe the issues concerning negative loading coefficients and non-significant factors provide additional evidence to support the discontinuation of latent variable modeling for the Overall Star Rating. As per the information provided in Table 4 Measures with Negative Loadings By Reporting Period, a hospital with better observed performance would receive a lower overall performance score due to the application of a negative loading coefficient. The use of the negative loading coefficient is effectively rewarding poor performance, and therefore is completely counterintuitive to the goal of the Overall Star Rating to identify organizations with top performance. The appropriateness of the inclusion of measures with consistently negative loadings should also be considered.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Negative Loadings	Measures with negative loading should be removed from the star-rating. We feel it is irrelevant how small of an impact a negative loading may have. The optics and messaging related to better care resulting in a lower score undermines the intent of the ratings and is unacceptable. It is especially troublesome that CMS has a large national improvement project aimed at reducing Clostridium difficile and improvements aligned to that goal can result in a lower score. If a simpler statistical process cannot be found to eliminate the disadvantages noted we suggest that measures calculated to have a negative loading two quarters in a row be permanently removed from the rating.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Negative Loadings	We agree that the treatment of measures with negative loadings is important. But we do not want to provide formal input on this subject until we can more thoroughly investigate the effect on the group scores of excluding measures with negative loadings and possibly measures with positive, but statistically insignificant or near-zero loadings. We will conduct this research as soon as we receive the full data set that we expect in December and we hope CORE can defer implementing any changes to its current policy regarding negative loadings until that time. If, at a later date, CORE decides to exclude measures with negative, statistically insignificant, and/or near-zero loadings, then we recommend that it reassess all measures with each iteration of the star ratings, irrespective of each metric's inclusion or exclusion in a prior iteration, because the loadings may fluctuate over time as hospital performance evolves.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Negative Loadings	1. Should measures with negative loadings be retained in the Overall Star Rating? Yes 2. Should measures with negative, but non-significant (for example, 95% confidence interval includes zero) be treated the same or different from measures with a significant negative loading? The same	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Negative Loadings	AHS believes that measures with negative loading should be retained in the Overall Star Rating because it is unknown what the impact will be of removing the negative loading on the other positive measures. While it is theoretically possible to improve a hospital's score from a poor performance on a negative loaded measure, a hospital has no prior knowledge of which measure will be negatively loaded. However, in the case that the results are not statistically significant at five percent, then AHS recommends that CMS remove them from the calculation.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report
9/27/2017	Negative Loadings	We compared star ratings for six hospitals in our region. Some of the hospitals that appear worse than us, had a higher star rating than us. Our hospital rated "worse" in two of the 22% measure groups (readmission and safety of care), while other hospitals rated "worse" in four -five of the 22% measure groups illogically scored a higher star rating (readmission, safety of care, patient experience – as well as timeliness of care). We understand that weights and loading coefficients are part of the equation. However it is still difficult to understand how hospitals that appear worse in more categories have a better star rating. We were also surprised to see the new PSI-90 measures (including PSI-11) were incorporated into this Star Rating. The weight and loading coefficients of the Safety of Care and PSI-90 measures were so high that it did not reflect the excellent scores we achieved in other quality areas. In our opinion, the publicly shared result gives a distorted impression of the outstanding quality of care we provide.	Robert Raggi	Robert.Raggi@providence.org	Individual	Please refer to the Summary Report

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9/27/2017	Negative Loadings	In the proposal for comment, CMS indicates the impact of negative factor loadings on the overall score is relatively modest. Regardless of the impact, the FAH strongly recommends CMS not include measures with negative factor loading in modeling of the star ratings program. Including measures that react this way in the model is not easily understood by patients, caregivers and the public and does little to inform overall patient care and public reporting.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Negative Loadings	1. Should measures with negative loadings be retained in the Overall Star Rating? *Aurora can see both sides of this discussion. Our concern is that the potential domino effect of removing negative items, and the resulting shifting of all the other items in the model, could result in additional items turning negative. Therefore negative items could be unavoidable. Aurora feels that leaving the process as is could at least minimize the number of measures with negative loadings. If negative items would be removed, we would strongly advocate that they ONLY be removed for that particular cycle and allowed to come into the models in later quarters – this would at least keep the incentive to work towards improvement* 2. Should measures with negative, but non-significant be treated the same or different from measures with a significant negative loading? *Aurora agrees that only those with significant negative loading should be removed.*	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Negative Loadings	As previously stated, Vizient continues to have substantial concerns regarding CMS's use of latent variable modeling. We believe the issues concerning negative loading coefficients and non-significant factors provide additional evidence to support the discontinuation of latent variable modeling for the Overall Star Rating. As per the information provided in Table 4 (Measures with Negative Loadings By Reporting Period), a hospital with better observed performance in a measure such as HAI-6 (Clostridium Difficile) reflecting a lower incidence of c.diff infection, would receive a lower performance score due to the application of the negative loading coefficient. The use of the negative loading coefficient is effectively rewarding poor performance, and therefore is completely counterintuitive to the goal of the Overall Star Rating to identify organizations with top performance. Additionally, inclusion of non-significant factors in the model calls into question the use of not only that individual measure in the group calculation, but also the effectiveness of the model to consistently identify measures of importance with any reliability. Thus, Vizient strongly urges discontinuation of the latent variable modeling approach, and encourages the use of a standardized weighting for each measure included in the rating.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Negative loadings	BJC appreciates the issues raised by CMS in terms of negative loadings. We agree that it would be undesirable to have a perception that improvement on a particular metric would lead to a lower overall rating. However, we would urge CMS not to remove measures with negative loadings while further decisions are made around methodology. CMS is right to point out that under the current approach, there is little empiric evidence that improvement on a measure with a negative loading would actually lead to a lower overall rating. That alone should assuage any concerns about the perception of having metrics with negative loadings included in the Star Rating in the short term. Further, we believe that CMS' proposed alternative to remove metrics with negative loadings would violate the goals of the Star Rating to be consistent, useful, and easy to interpret. The nature of the methodology means that metrics are re-assigned loadings during every rating refresh. This means that individual metrics could float in and out of the rating based on the current latent variable model. We believe this approach (sometimes certain metrics are in, but other times they are out) would be extremely difficult for patients to understand, and thus would be counter to the goals of the Star Rating.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Hospital System	Please refer to the Summary Report
9/27/2017	Negative Loadings	However, we also feel that the use of the latent variable model should be reconsidered. As outlined in the attached memo from Georgetown, the assumptions underlying such a model may not be met in some of the domains, and thus the negative loadings may actually be inappropriately applied. We hope CMS will consider alternative means for combining performance variables in the future. Should CMS continue the use of the latent variable model, we would urge CMS not to remove measures from the Star Ratings in the short term due to negative loadings.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

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9/27/2017	Negative Loadings	The discussion about negative loadings is similar—the choice should not be between a post-hoc fix to the latent variable model or a retention of an aspect that lacks face validity—it should instead prompt a search for a model that does not present such a tradeoff.	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Negative Loadings	The existence of such negative loadings indicates a lack of proper model specification and variable selection. In addition to these technical flaws in the statistics model, the modeling is also not clinically sound. Furthermore, negative loadings discourage hospitals by penalizing them for performing well on these measures. For instance, the negative loading of HAI-6 C. difficile in the Safety of Care measure group strengthens HANYS' position that PSI-90, which is dominantly influential on the Outcome: Safety group score, is flawed and should be removed from the Star Ratings.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Negative Loadings	The fact that the star rating method yields negative loading is disturbing and suggests revisiting the latent variable model (LVM) that has been initially selected for the star rating. In regard to the options presented as to how to address measures which have a negative load, I prefer option #2: remove negatively loaded measures. The rationale is that it is counter-intuitive to have a measure as significant as C. difficile infections have a negative load where the practical implication is the better a hospital does in this infection measure, the more it adversely affects their star rating. In addition to it being counter-intuitive, it conflicts with CMS value based purchasing policy and practice. The C. difficile infections measure is in the Hospital Acquired Conditions Reduction Program where essentially the financial penalty is lessened the better a hospital performs.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/27/2017	Negative Loadings	If option #2 is employed, suggest that such negatively loaded measures be reintroduced into the LVM in the subsequent quarter. As we have seen with quarterly updates to the star rating, some measures switch from a negative load to a positive load from one quarter to the next.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report

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8/29/2017	Public Reporting Thresholds	I have comments on a few of the questions posted in the proposal. 1. Should the current measure group requirements (three measure groups with one outcome group) be modified? Yes, I work for a 26 bed Orthopedic Specialty Hospital. We were rated as 5 stars since the program started. As of December 2016 we were listed as N/A because we did not have data in three measure groups. We never will yet we are excluded from the program. 2. Should the current minimum measure requirement (three measures) be modified? Yes, because our numbers are low I realize that one bad indicator will skew the results but we need to be included in the program.	Carla Parker, MSN, RN, *Director of Quality and Risk Management*, OSS Health	cparker@osshealth.com	Individual	Please refer to the Summary Report
9/10/2017	Public Reporting Thresholds	Regarding public reporting thresholds: I don't have much to add here.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Public Reporting Thresholds	1. Although the goal of maximizing the number of hospitals included in Overall Star Ratings is understood, heterogeneity and information bias are critical considerations when attempting to fairly and equitably classify providers. 2. MHA has previously provided feedback and commentary to CMS about comparability and equity of Overall Star Ratings based on completeness of measures and domains reported (see appendix II) as well as their sensitivity to the reporting / inclusion of constituent items that can and do vary systematically based on hospital size, type and particular populations served. 3. Updated analyses looking at domain and measurement volume across Overall Star Ratings based on proposed enhancements presented in section 3.1 are provided in the appendix and show a clear inverse association between Overall Star Ratings and volume of reported measures. 4. Higher public reporting thresholds or an adjustment to Summary Score performance based on volume of reported measures is suggested.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/25/2017	Public Reporting Thresholds	LVHN shares the concern that hospitals being compared in the Overall Star Rating are too different with respect to the number or type of measures included. Because the types and number of measures reported can vary between hospitals, we also suggest that reporting criteria should be adjusted so that the Overall Star Rating includes hospitals reporting more similar numbers of measures.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report

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9/25/2017	Public Reporting Thresholds	In other words, three measures should still be required for additional measure groups to be included.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Public Reporting Thresholds	In addition, we believe that not all other measures should be included in the star rating once the reporting threshold is met.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Public Reporting Thresholds	We have no strong opinions on these issues.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report

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9/26/2017	Public Reporting Thresholds	1. Should the current measure group requirements (three measure groups with one outcome group) be modified? No 2. Should the current minimum measure requirement (three measures) be modified? No 3. Should the current inclusion of all other measures once the reporting threshold is met be modified? Yes	Rebecca Redding, MD, *Evidence Based Care Coordinator*, Randolph Health	Rebecca.Redding@randolphhealth.org	Individual	Please refer to the Summary Report
9/26/2017	Public Reporting Thresholds	The public reporting thresholds should continue to require at least three measure groups, one of which must be an outcome group. However, additional measure groups should be included only if there are at least two measures in the group. This will maintain the goal of maximizing the number of hospitals receiving a star rating but eliminate the potential for a single measure to have a large impact on the final score.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	Consider changing the public reporting threshold for reliability-adjusted outcomes to exclude low-volume hospitals whose results appear average but are really not calculable. However, on the subject of the public reporting thresholds, we need to raise a vital issue that was not addressed in the report and which we briefly referenced above. That issue pertains to the volume of cases required for the public reporting of individual measure results on Hospital Compare, which is the foundation for the first star reporting threshold.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Reporting Thresholds	Background For outcome metrics, the calculation of each hospital's risk-standardized rate is the reference population rate multiplied by the hospital's ratio of observed to expected events (the ratio), where the hospital's ratio is actually a blend of its own ratio and the reference population ratio of 1.0. This blending is a reliability adjustment. The hospital-specific share of the blend depends on the size of the confidence interval around the hospital's expected events, which is driven by the size of the hospital's denominator. Hospitals with large denominators have narrow confidence intervals—indicating reliable results—and high hospital-specific shares, while hospitals with small denominators have wide confidence intervals—indicating unreliable results—and low hospital-specific shares. Issue For low-volume hospitals, the reliability adjustment can result in a ratio equal or close to the population ratio of 1.0. For such hospitals, the correct interpretation of the ratio is not that the hospital has average performance, but that the hospital has "pseudo-average" performance because its actual performance cannot be measured. Currently, pseudo-average performance is publicly reported if the hospital has at least 30 at-risk cases or days and, based on a review of the Hospital Compare data, we believe this occurs often. Therefore, under the star ratings method, a hospital can pass the threshold of having three publicly reported measures in a measure group even if its reported performance is not its own. We believe this policy is inappropriate because pseudoaverage results can mislead consumers and distort the measure group scores and star ratings of hospitals whose reported risk-standardized rates reflect their true relative performance.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Reporting Thresholds	Recommendation Therefore, with respect to reliability-adjusted measures, we strongly recommend that CMS/CORE develop a proposal to replace the volume-based reporting threshold with a new reporting threshold that requires a minimum hospital-specific share of the blended ratio of observed to expected events. Further, we request that CMS/CORE provide a data set that would allow qualified organizations to conduct similar research.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	We also want to defer commenting on these policies until we can test the effects of alternative policies on the full data set that will be made available in December.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	1. Should the current measure group requirements (three measure groups with one outcome group) be modified? No 2. Should the current minimum measure requirement (three measures) be modified? No 3. Should the current inclusion of all other measures once the reporting threshold is met be modified? No	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Public Reporting Thresholds	1. Should the current measure group requirements (three measure groups with one outcome group) be modified? • AHS recommends that the requirements not be modified and agrees with the current measure group requirements. 2. Should the current minimum measure requirement (three measures) be modified? • No, AHS believes that CMS should maintain the current measure requirement at three measures. 3. Should the current inclusion of all other measures once the reporting threshold is met be modified? • No, AHS believes that the current inclusion of all other measures should not be modified.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	I agree that requiring a minimum number of measures within a domain to use that domain is appropriate. In lieu of using an absolute number of measures (n=3), CMS may want to consider using a percentage of measures for which data are available, as for some of the domains there is a large number of measures.	Matt Austin, PhD, *Assistant Professor*, Armstrong Institute for Patient Safety and Quality; *Assistant Professor,* Anesthesiology and Critical Care Medicine; Johns Hopkins University School of Medicine	410-637-6263 jmaustin@jhu.edu	Individual	Please refer to the Summary Report

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9/27/2017	Public Reporting Thresholds	Vizient recommends CMS consider assigning individual measure weights within each measure group based on timeliness of the data (higher weight on more currently available data, lower weight on older data) and clinical relevance (higher weight on NHSN measures, lower weight assigned to PSI-90 and THK measures). Once these weights are assigned, the percentage of data completeness can be determined. For instance, hospitals included in scoring and reporting must have at least 70% of the overall measure group weight and must have 70% of the measure weights in five of the seven measure groups. These thresholds ensure that only those hospitals with adequate data are used in the scoring and reporting. Vizient's Quality Leadership Hospital ranking, which evaluates hospital's performance based on contemporary and timely data and measures, leverages this same criteria for more meaningful ranking and performance reporting.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Public Reporting Thresholds	While we understand this requirement is to ensure that more hospitals are included in the Star Rating, we believe it should be modified. We would suggest that CMS evaluate whether the public reporting threshold could be having sufficient data for at least three measure groups with at least **two** of them being outcomes groups (mortality, readmissions, and safety). We believe this could further enhance the validity of the comparison by limiting the pool of hospitals to those that have sufficient volume to be adequately compared to one another. We, however, would want to ensure this step did not unfairly disqualify hospitals from the Star Rating. We would ask CMS to evaluate the current public reporting thresholds and to consider imposing a requirement that there be sufficient data for at least three measure groups with two of them being outcomes groups in order to receive a Star Rating.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	As another alternative, CMS could make adjustments to the summary score performance based on the volume of measures reported	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Public Reporting Thresholds	HANYS' analysis shows that hospital summary scores do not differ significantly between hospitals reporting three, four, or five measure groups. As a result, we believe the current threshold of requiring a minimum of three measure groups strikes a good balance that allows maximum participation.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Public Reporting Thresholds	However, HANYS recommends the exclusion of any measure group that has two or fewer quality measures reported. HANYS' analysis shows that the inclusion of such measure groups largely skewed the summary scores of these hospitals, which disadvantage hospitals reporting more measures.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
8/29/2017	Stratification	1. Should the Overall Star Rating be stratified? If so, by what characteristics or feature of hospital quality reporting? Yes, perhaps the characteristics could be by specialty hospital or by number of beds or discharges per year. 2. Should the Overall Star Rating be stratified by type of hospital? Yes, that would be appropriate. 3. Are there other hospital characteristics we should consider in any stratification testing? Yes, perhaps academic hospitals versus community hospitals. 4. Do you have any concerns about the comparability of star ratings if stratification is applied? I just want to make sure that the great work we do is reflected to the public.	Carla Parker, MSN, RN, *Director of Quality and Risk Management*, OSS Health	cparker@osshealth.com	Individual	Please refer to the Summary Report
9/10/2017	Stratification	Regarding stratification: The goal of the rating project is to produce an "overall" quality measure. Isn't using different ratings for different hospitals is giving up on achieving that goal?	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/20/2017	Stratification	1. Stratification of Overall Star Ratings is required in order to achieve any chance of parity and equity as a basis for comparing health care providers and demonstrating a meaningful basis of comparison for consumers. 2. Stratification should be undertaken that considers at least three domains of measures that are, by nature, interrelated and demonstrate substantial systematic associations with current and proposed formulations of Overall Star Ratings (see appendix I, II): • Hospital characteristics including number of beds, annual discharge volume, urbanicity, breadth of services offered. • Patient and community-level sociodemographic characteristics that are consistently and demonstrably associated with patient outcomes that operate largely or completely beyond the influence of hospital processes. • Completeness of reported measures. 3. Although we recognize that stratification introduces at least some degree of additional complexity, the experience of observing consumer behavior and decision-making across numerous industries (education, automobile, hospitality, restaurant to name a few) demonstrates consumers' ability to recognize the importance of classification distinctions in order to make meaningful quality and cost comparisons. 4. Other popular hospital quality rating systems (U.S. News and World Report, Truven 100 Top Hospitals) successfully employ stratification to ensure comparisons made are equitable and valid.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/25/2017	Stratification	LVHN remains concerned that hospitals included in the Overall Star Rating are too different in numbers or types of individually reported quality measures. LVHN supports further investigation in the stratification by hospital type. Hospitals that care for patients with highly complicated illness or trauma should not be "compared" to a specialty hospital designation. This does not provide consumers with accurate comparison information to make consumer directed healthcare decisions.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Stratification	We believe hospitals should not be stratified because we agree with concerns that stratification may be overly-confusing: star rating consumers should not be unable to directly compare specific hospitals due to stratification.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report
9/26/2017	Stratification	Display Overall Star Ratings stratified by type of hospital AND combined MGH supports stratification of the hospital Overall Star Ratings by hospital type. The current methodology appears to favor smaller hospitals that report fewer measures than larger hospitals. This could be corrected by comparing “like” hospitals, stratified by AMC and community types. However, we also suggest CMS continue to report the Overall Star Rating for full transparency and utility for consumers. Some patients may be choosing between two AMCs, and others may be choosing between an AMC and community hospital. Publishing both results would assist consumers in these different situations.	Elizabeth Mort, MD, MPH *Senior Vice President of Quality & Safety and Chief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Health System	Please refer to the Summary Report

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9/26/2017	Stratification	1. Should the Overall Star Rating be stratified? If so, by what characteristics or feature of hospital quality reporting? *I think it might be more fair to have CAH in their own stratum* 2. Do you have any concerns about the comparability of star ratings if stratification is applied? *Not if you have only 2-3 strata. If it goes beyond three then I think it gets too messy*	Rebecca Redding, MD, *Evidence Based Care Coordinator*, Randolph Health	Rebecca.Redding@randolphhealth.org	Individual	Please refer to the Summary Report
9/26/2017	Stratification	VCU Health strongly supports the stratification of the Overall Star Rating. VCU Health and the American Hospitals Association found the following eight characteristics to be significant in identifying two distinct hospital cohorts: • Total Outpatient Visits • Acute Transfers In • Case Mix Index • Inpatient Surgical Cases as a percentage of all admissions • Outpatient Surgical Cases as a percentage of total surgical cases • Trauma Service • Bone Marrow Transplant Service • All Solid Organ Transplant Service We recommend CMS cohort stratification using similar features, which will add credibility and validity to the hospital rankings.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/26/2017	Stratification	WHA cautions CMS to be thoughtful about the use of stratification. Stratification could add additional complexity to a method that is already too complex. If a hospital has multiple ratings, one without stratification and others with stratification it will become even more difficult to know how to explain and use the ratings. There is not yet agreement about how to stratify measures so we feel the topic of stratifying ratings is premature.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Stratification	Third, Star Rating must utilize tools that facilitate "apples to apples" comparisons by consumers lacking specialized knowledge. The average consumer may not understand the difference between the services at an academic medical center and a community hospital. While we understand this undertaking is challenging, it is extremely important that the average consumer be able to group peer hospitals accurately when examining a rating. We encourage CMS to defer to the expertise of the hospital community in developing these groupings. Finally, the Star Rating program must account for differences in hospital mission. For instance, academic medical centers are likely to experience higher acuity and socioeconomic diversity and would need a methodology that does not penalize work that is central to their mission.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report

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9/27/2017	Stratification	Develop stars for general hospitals based on a data set of general hospitals only but continue to develop stars for specialty hospitals based on the entire hospital data set. CORE also requested feedback on whether and how to stratify overall hospital star ratings. There are two ways to interpret stratification in this context. One is whether CORE should develop star ratings based on different sets of hospitals and the other is whether Hospital Compare should allow consumers to filter hospitals based on certain characteristics. GNYHA is providing comments on both interpretations. Stratifying Hospitals to Develop Star Ratings We have observed that general hospitals are under-represented relative to specialty hospitals among hospitals with 5-star ratings because of the structure of the public reporting thresholds. We fully support the extent to which specialty hospitals earn five stars. But we also believe that a higher proportion of general hospitals should be able to earn five stars—i.e., that the quality of general hospitals should be better differentiated—because most patients need care at general hospitals. To achieve this goal, we recommend deriving star ratings from two sets of hospitals. General Hospitals. For general hospitals, star ratings should be developed from a data set that includes only general hospitals, which we would define as hospitals having a publicly reported mortality rate for both heart failure and pneumonia. Based on last year's data set, we believe no other criteria are needed, but we will continue to empirically test this definition. Specialty Hospitals. For specialty hospitals, star ratings should be developed from the current data set that includes all hospitals eligible for a star rating. Even though this data set would also produce star ratings for general hospitals,	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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		the publicly reported star ratings for general hospitals should be based on the general hospital data set.				
9/27/2017	Stratification	Filtering Hospitals on Hospital Compare Due to volume concerns, we do not recommend that CMS/CORE develop star ratings based on other hospital characteristics. However, we do think consumers should be able to select hospitals for comparison on Hospital Compare based on criteria other than location, hospital type, and emergency services. Earlier, we urged CMS to provide stars for each measure group, just as it provides stars for each dimension of the overall HCAHPS star ratings. Here we recommend that Hospital Compare allow consumers to filter hospitals based on individual measure group stars. They can already compare different aspects of performance once they select a set of hospitals, but they cannot yet select hospitals based on different aspects of performance.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	1. Should the Overall Star Rating be stratified? If so, by what characteristics or feature of hospital quality reporting? No 2. Should the Overall Star Rating be stratified by type of hospital? No 3. Are there other hospital characteristics we should consider in any stratification testing? No 4. Do you have any concerns about the comparability of star ratings if stratification is applied? No	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report
9/27/2017	Stratification	AHS believes that the Overall Star Rating should be stratified by type and characteristic of hospitals. Hospitals that have more measures and domains reported generally perform worse than hospitals with fewer number of measures and domains reported. These hospitals might be different than their counterparts and a rating system should account for these differences in characteristics. The Overall Star Rating should be stratified by the following types and characteristics: • Hospital size (large/small bed size) • Teaching status • Geographic location (rural/urban) • Acute or Long-Term Care • Specialty or General hospitals • Health Care System or Independent hospital • Socioeconomic status of the patients (e.g. dual-eligibility) and other demographics characteristics such as age.	Michael E. Griffin, *Vice President of Advocacy and Public Policy,* Adventist Health System	Julie Zaiback-Aldinger Julie.Zaiback@ahss.org	Health System	Please refer to the Summary Report

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9/27/2017	Stratification	Stratification of hospitals by 'type' is one method that is often proposed to deal with the perceived unfairness of certain measures included in the Rating. Given that patients do not necessarily understand the differences in 'types' of hospitals, my recommendation would be to address any measurement bias at an individual measure-level and then continue to compare ratings to all hospitals.	Matt Austin, PhD, *Assistant Professor*, Armstrong Institute for Patient Safety and Quality; *Assistant Professor,* Anesthesiology and Critical Care Medicine; Johns Hopkins University School of Medicine	410-637-6263 jmaustin@jhu.edu	Individual	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	1. Should the Overall Star Rating be stratified? If so, by what characteristics or feature of hospital quality reporting? *Aurora feels it would be helpful to have both an overall rating, as well as one split by number of measures and/or types (such as specific outcome measures). Currently, a hospital reporting both mortality and readmissions could be a 4 and another hospital that only reports patient experience (and perhaps not performing well on mortality or readmission) is a 5. As patients look to start ratings to inform their decisions, those ratings should not misrepresent performance by not being transparent on what is included.* 2. Should the Overall Star Rating be stratified by type of hospital? *Aurora feels that either the Star Rating or the methods should be adjusted to include stratification within the modeling. The need for hospital attributes to be included in any kind of hospital compare" has been well documented by CMS. Additionally, it may be more informative for patients seeking particular care to be able to view ratings by volume of that procedure/disease as a 5 Star Hospital may not be performing extremely well with the specific area of interest for a patient* 3. Are there other hospital characteristics we should consider in any stratification testing? *Aurora offers the following suggestions: hospital volume, type, location, specialty hospital designation* 4. Do you have any concerns about the comparability of star ratings if stratification is applied? *Aurora does not have concerns if stratification is applied. Our concerns are with the current methodology that does not stratify.*	Patrick Falvey, PhD, *Executive Vice President & Chief Transformation Officer*, Aurora Health Care	Anthony Curry 414-299-1657 Anthony.Curry@aurora.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	We urge CMS to consider using stratification or peer grouping to the Star Rating System to allow consumers access to more reliable information about hospital quality. As a member of both America's Essential Hospitals and Vizient, UK HealthCare supports their recommendations regarding stratification or peer grouping with the Star Rating System, to add credulity and validity to the hospital rankings. We believe stratification would offer consumers an apples-to-apples comparison of quality among hospitals versus the current one-size-fits-all methodology that does not distinguish between the large differences among hospitals and the patient populations they serve	Mark D. Birdwhistell, *Vice President for Administration and External Affairs*, UK HealthCare	Trudi Matthews 859-218-5595	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	Vizient strongly supports the stratification of the Overall Star Rating. With hundreds of diverse hospitals participating in Vizient's Academic Medical Center (AMC) and Community Quality Leadership Hospital rankings, Vizient has deep experience evaluating relevant and objective criteria in order to provide meaningful comparisons. To identify these criteria, Vizient evaluated hundreds of characteristics utilizing our own Clinical Data Base (Vizient CDB), as well as data from the American Hospital Association (AHA). We found the following eight characteristics to be significant in identifying different hospital cohorts: 1. Total Outpatient Visits 2. Acute Transfers In 3. Case Mix Index 4. Inpatient Surgical Cases as a percentage of all admissions 5. Outpatient Surgical Cases as a percentage of total surgical cases 6. Trauma Service 7. Bone Marrow Transplant Service 8. All Solid Organ Transplant Service Vizient recommends that CMS employ cohort stratification using similar features, which will add credibility and validity to the hospital rankings.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Stratification	Vizient continues to have concerns regarding the unbalanced impact of the assignment of the Overall Star Rating on Academic Medical Centers. As evidenced in the chart (Vizient Graph 2) above, the distribution of the Overall Star Rating for the Academic Medical Centers would be impacted in that there are more one and five-star hospitals and fewer three-star hospitals; and a disproportionate number of the Academic Medical Centers are designated as one and two-star hospitals. Vizient strongly believes that this is not an accurate assessment of the quality of the Academic Medical Center cohort of hospitals and is further justification for the stratification of the Overall Star Rating by appropriate comparison peer group.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	Although we appreciate CMS' suggestion and motives behind implementing stratified overall ratings by hospital characteristics in the Star Rating, we are concerned about the potential implications of such a move. First, it would be extremely difficult, if not impossible, to come to a reasonable consensus on how stratification would work. There are numerous variables and characteristics that could be used (e.g. safety net status, teaching status, case mix index, geographic setting, so on and so forth) and all have merits. Deciding on a robust system by which to stratify overall hospital quality would be an exercise in futility. Further, we believe stratification would violate the goals of the Star Rating to be useful and easy to interpret for consumers. If stratification were to move forward, consumers would be left in the unenviable position of having to assess certain hospital characteristics in addition to the already complex metric system. We also believe it would further dilute the ability of consumers to make adequate comparisons of hospitals because they would not be intimately familiar with the different characteristics upon which they were assessed.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Stratification	Where CMS feels there are hospital characteristics specific enough to make clean decisions around strata – for example, critical access hospitals or specialty hospitals, which tend to report different measures and have different structural features and patient populations – we would ask that the Department conduct simulations to understand how stratification would impact hospital performance both for these groups and overall. Specific methodological decisions would influence the ultimate impact of stratification, and would need to be elucidated for us to be able to evaluate such a proposal. For example, would all hospitals be included in the same group for performance measurement and then stratified for star assignment, or would each measure be re-normalized within each group? Would there be an expectation that the same proportion of hospitals in each stratum would receive high or low stars? How would patients be able to sort or specify on Hospital Compare to meet their needs as consumers?	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report
9/27/2017	Stratification	Given the complexity of stratification and the current lack of clarity around its implementation, we would instead suggest that in the near term CMS focus on improving risk adjustment of individual metrics to make comparisons more equitable and accurate across all hospitals and hospital types. We believe this approach would better meet the overall goals of the Star Rating and better reflect the overall quality of care delivered at facilities across the country. Risk adjustment of individual measures would allow the simplicity of a single rating system to remain, while forming a better comparison basis for hospitals.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

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9/27/2017	Stratification	The AAMC recommends that CMS explore measure performance within specific hospital peer cohorts so that hospitals with similar characteristics and risk profiles are compared to each other. The use of peer cohorts may help mitigate limitations in comparing hospitals with different types of service mix and patient complexity. Teaching hospitals perform a wide array of complicated and common procedures, pioneer new treatments, and care for broader socio-demographic patient populations that may not have access to regular care. Yet under the star ratings program, they are compared directly to hospitals with more homogenous patient populations and hospitals that do not do enough procedures to be counted. As an example, CMS uses up to 57 measures to calculate ratings for teaching hospitals and as few as nine measures on some hospitals that treat patients with less complex conditions or that treat a limited number of conditions.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Stratification	AAMC analysis of the ratings has confirmed that the lower the number of measures a hospital reported, the more likely a hospital was to receive a higher star rating. In fact, hospitals that reported on only 60 percent of the metrics or less received almost half of the five-star ratings. After stratifying hospitals before applying the star ratings methodology, AAMC analysis found that the following characteristics are significant factors that could be used to determine rankings. • Disproportionate hospital share patient percentage • Number of measures reported • Number of domains reported • Teaching status	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Stratification	HANYS supports stratification of hospitals. Hospitals vary, sometimes significantly, by their size, geographic location, population served, and services provided, etc. These factors do impact the quality performance, and in particular the Star Ratings. For instance, consistent with the development team's re-evaluation, HANYS' analysis shows that, on average, hospitals reporting five or fewer measure groups have substantially higher average summary scores than their counterparts that reported on six or seven measure groups. As a result, the number of measure groups reported may serve as a promising stratification group.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Stratification	HANYS does recognize the level of complexity the stratification may add to the interpretation of Star Ratings. Because the Star Ratings itself is too complicated to be understood and meaningfully used by patients and healthcare providers, CMS should consider removal of the Star Ratings as a whole. In the meantime, stratification does present a means to improve the accuracy of Star Ratings.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Stratification	HANYS urges CMS to disclose the impacts of stratification, and/or other revisions, to allow the healthcare field opportunities to provide feedback before they are finalized.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Stratification	I recommend that the hospital star rating continue to be reported without stratification. I concur with the stated rationale against stratification stated in this subsection, which are: -Stratification is not indicated by the measure steward. Stratification implies there is a substantial bias that is unaddressed by the measures. However, no evidence of such a bias was presented to the TEP nor in this report. Thus, any stratification would not be empirically based. To better inform a discussion regarding stratification, it would be helpful to share analyses of stratifications by various hospital attributes with the TEP (and the public in the public comment phase).	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/10/2017	Measure Inclusion	Regarding measure inclusion: I don't have much to add here, except to say that it might be worth reviewing the measures with negative loadings to see if it's actually clear which direction is positive.	Bo Bayles	bbayles@gmail.com	Individual	Please refer to the Summary Report
9/20/2017	Measure Inclusion	The current practice of de facto dismissal of structural measures does not seem warranted given that certain structural measures vary considerably across health care providers and may reflect NQF best practices. Examples of such structural measures include LeapFrog e-prescribing measures, the presence of intensivists in the ICU, or having a patient-centered advisory council. These could be summarized as an additional component of measurement groups or might be best handled as potential stratification criteria.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/20/2017	Measure Inclusion	Compared to the base CMS model, the complete domain model added one star to nearly one- third (871, 29.1 percent) of all hospitals with seven domains represented, while surprisingly deducting stars from none. The complete domain model also featured modest agreement with the base CMS model (Kappa = 0.57), suggesting the models are very sensitive to the arbitrary inclusion or exclusion of domains and underlying measures (table 3). Our findings also show that the star ratings are extremely sensitive to the exclusion of methodologically questionable and potentially repetitive individual measures. Excluding PSI- 90 from the safety of care domain changed the star designations for 1,350 hospitals (29.7 percent), with the majority having a star taken away. Removing the single PSI-90 measure yielded results with limited agreement with the base CMS model (Kappa = 0.52). The models were less sensitive to the exclusion of HWR individually, with 15.1 percent of hospitals changing star designations and moderate agreement with the original ratings (Kappa = 0.75).	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report
9/20/2017	Measure Inclusion	The final sensitivity test was limited to hospitals with seven domains, and excluded both the PSI-90 and HWR measures. Imposing these assumptions changed the star designation of 36.8 percent of included hospitals with a range of two stars lost to three stars gained. This approach also revealed very limited agreement with the base CMS model (Kappa = 0.45), suggesting strong sensitivity of the existing measures to the modifications we tested and raising questions on the reliability of the measures. Additional analysis is needed to identify hospital characteristics associated with positive and negative impacts from the results of these sensitivity tests.	Herb Kuhn, *President and CEO,* Missouri Hospital Association	Daniel Landon dlandon@mhanet.com	Hospital Association	Please refer to the Summary Report

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9/25/2017	Measure Inclusion	LVHN appreciates the opportunity to revisit measure inclusion into the Overall Star Rating methodology. We currently agree with Overall Star Rating measure inclusion and exclusion criteria that was vetted through a Technical Expert Panel, the Patient & Patient Advocate Work Group. We encourage continued routine assessment of inclusion and exclusion criteria.	Matthew McCambridge, MD, MS, FACP, FCCP, *Chief Quality Officer*, Quality Department, Lehigh Valley Health Network	Celena T Romero Celena_T.Romero@lvhn.org	Health System	Please refer to the Summary Report
9/25/2017	Measure Inclusion	Although we do not feel any measures should be included in the star ratings that currently are not, instead we propose that CMS strongly consider eliminating PSI-90 and PSI-04 from the Safety of Care and Mortality measure groups respectively. Many concerns about the accuracy of these measures have been raised, with many of them being related to inaccuracies and inconsistencies among the administrative billing data that the PSIs are derived from. One recent study examined five PSI measures and concluded that only one of them was reliably-coded at least 80% of the time (Ref. 2). Another study examined all PSIs flagged at a six-hospital academic medical center in 2014: they reversed 6.7% of PSIs due to inherent AHRQ algorithm limitations and 28.2% of PSIs overall (Ref. 3). Furthermore, the patient demographics and comorbidities used for PSI risk-adjustment are not captured consistently across hospitals (Ref. 4). As for PSI-04 (Death among Surgical Inpatients with Serious Treatable Complications), we believe it contains a fatal flaw of its own: patients are included in this measure even if their adverse outcome was present-on-admission but the corresponding diagnosis code was not listed in the primary position. As a hypothetical example, if a patient 1) was admitted for a wedge resection due to lung cancer, 2) was	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report

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		simultaneously being treated for a prior DVT that occurred just a few months prior, and 3) died due to complications of the surgery, then AHRQ might consider this patient a "failure-to-rescue from DVT" if DVT was not the primary diagnosis although it was present-on-admission. Another example would be a patient who 1) was admitted with a present-on-admission cardiac arrest due to a drug overdose, 2) underwent a bronchoscopy, and 3) died shortly afterward: if the primary diagnosis was related to drug toxicity instead of the cardiac arrest, then AHRQ might consider this a "failure-to-rescue from cardiac arrest". Although our facilities have experienced numerous patient mortalities over time with similar healthcare trajectories as these examples, many of them were included in PSI-04 when we feel they should have been excluded instead. If these issues are not eventually rectified, then only the complete removal of this measure would alleviate our concerns.				

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9/26/2017	Measure Inclusion	**Only include active measures in the Star Rating, and allow for comment before adding new measures** We strongly urge CMS to not include retired or delayed measures in the scoring for the Overall Star Rating. We also urge CMS to offer a public comment period before adding new measures to the composite. Under the current process, new Inpatient and Outpatient Quality Measures automatically roll into the composite without opportunity for public comment.	Elizabeth Mort, MD, MPH *Senior Vice President of Quality & Safety and Chief Quality Officer,* Massachusetts General Hospital and Massachusetts General Physicians Organization	emort@partners.org	Health System	Please refer to the Summary Report
9/26/2017	Measure inclusion	VCU Health strongly urges CMS to not include in the scoring, irrespective of timeframe, measures reported on Hospital Compare that the agency has delayed or retired (i.e., stroke measures). Specifically, we are concerned that including measures in the scoring that hospitals are no longer required to collect may reduce hospital engagement with the ranking and decrease the generalizability/utility of the rating. VCU Health believes that once a measure has been removed from the methodology or IQR or any other CMS program, it should not continue to be reported on Hospital Compare or included in Overall Star Rating calculations – even those using historical performance data.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/26/2017	Measure Inclusion	VCU Health strongly encourages alignment with time periods, AHRQ methodology, and measures across all CMS programs when possible. It concerns VCU Health that PSI-90 has remained in the Star Rating despite being PSI 90 from the Hospital VBP Program beginning with the FY 2019 program year. In addition, we challenge keeping the measure names the same for PSI-90 and measures within PSI-90 that have substantially changed. For example: • PSI-08 changed substantially from measuring postoperative hip fracture to measuring in-hospital falls with hip fracture. • PSI-07 was removed from PSI-90. • PSI-09, PSI-10, and PSI-11 were added to PSI-90. • PSI-12 and PSI-13 had specification changes. • PSI-15 was changed from including all medical/surgical diagnoses to abdomino-pelvic procedures only. • Weighting of PSI-03, PSI-08, and PSI-13 increased, while others decreased.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/26/2017	Measure Inclusion	VCU Health strongly recommends re-naming and re-endorsing measures, including PSI-90, which have had substantial specification changes. Not doing so causes confusion among clinicians and makes targeting improvement efforts extremely challenging. Measures with changes to their inclusion or exclusion criteria, in essence, are different measures and are not comparable to previous reporting years. In addition, VCU Health feels that there has been an overreliance on claims-based measures within the Star Rating. It is a lower burden on resources to abstract process measures than it is to reconcile claims data to find true opportunities for improvement	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report

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9/26/2017	Measure Inclusion	WHA supports the current criteria for measure inclusion, however recommends the removal of the Efficient Use of Imaging category as described above.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	The LVM computes a loading coefficient to all measures in a given composite / group of measures. The loading figure of a measure represents the measure's influence on the group score relative to the other measures included in the same group. In other words, the higher the correlation of the measure to the composite, the higher the loading coefficient. While this appears to have some intuitive appeal, an examination of loading coefficients creates a question if it is appropriate for all the composites used in the Hospital Compare star rating. The concern is in regard to the "Safety of Care" composite. Figure 5 below depicts the assignment of the loading figures based on the most recent (December 2016) methodology update presently available on QualityNet. Note the extent to which the AHRQ PSI 90 dominates the Safety of Care composite. Nearly two-thirds (65%) of the loading goes to this one measure of eight measures in the composite. It has more than five times the loading of the measure with the second highest loading coefficient. Additionally, it has nearly three times the loading of all the CDC infection measures combined.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/27/2017	Measure Inclusion	This loading distribution is anomalous with the other composites. For example, in the other two outcome based composites (i.e. Mortality and Readmissions), the measure with the highest loading possesses about 20% of the load (compared with 65% of PSI 90).	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	I would suggest the aforementioned issue in the Safety of Care composite needs to be further examined and addressed. For example, identify and share the loading of each PSI in the PSI 90 composite. Perhaps the application of LVM is not a one size fits all approach to every composite, or the composition of this (and potentially other) composite(s) needs to be reconsidered.	John Bott, MSSW, MBA	john63bott@gmail.com	Individual	Please refer to the Summary Report
9/27/2017	Measure Inclusion	We do not believe it is acceptable to include in an overall star rating measures that do not meet basic reliability and validity tests for public reporting.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	Our two recommendations in this area are: In the timeliness of care measure group, we recommend eliminating OP-18b/ED-3, Median time from ED arrival to ED departure for discharged ED patients because it inappropriately encourages speedy treat and release instead of taking the appropriate amount of time for excellent care. We also urge CMS and CORE to resolve their conflict regarding the MSPB measures. Either these measures are appropriate for the star ratings or they are inappropriate for HVBP.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	1. Are there other measure inclusion criteria the Overall Star Rating methodology should take into consideration? No 2. Are there certain measures that are currently excluded that you feel should not be excluded? No	Peggy Goos, MS, RRT, *PI/RT Director*, Avera Heart Hospital of South Dakota	605-977-7025 peggy.goos@avera.org	Individual	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	The current measures on Hospital Compare may not reflect the care of greatest interest to patients, for instance outcomes for emergent surgical care or cancer care follow-up or treatment of a rare disease may be more important than what currently is displayed.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	CMS selects measures from both inpatient and outpatient hospital quality reporting programs and assigns the measures to seven groups: mortality, safety, readmissions, patient experience, timeliness of care, effectiveness of care, and imaging efficiency. Not all measures reported on Hospital Compare are used in determining the star ratings. The measure inclusion criteria described in section 5.2 is reasonable. Each group is assigned a weight in the overall star rating.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	**We are concerned that certain metrics may disadvantage hospitals that serve complex and vulnerable patient populations.** The Star Ratings rely heavily on the calims-based patient safety for selected indicators (PSI-90) composite measure, which fails to accurately gauge clinically relevant complications, and similar metrics. UK HealthCare performs high-risk procedures, such as cancer surgery, often not performed at the facilities against which we are measured. Events captured in PSI-90 composite measure may occur disproportionately in teaching hospitals and, therefore, are not reflective of a true difference in performance when compared with other types of hospitals. In these cases, the high risk of infection does not reflect poor quality of care at our hospitals, but rather reflects the types of procedures performed and complex conditions treated. Moreover, we have concerns that the data delay of two years for some measures is a substantial lag that is not indicative of hospitals' current performance. In addition, we have concerns about including HCAHPS survey data in the calculation of overall star ratings. Research also has shown a greater likelihood of low HCAHPS scores from patients admitted via the ED, as patient-provider interactions ofter are more limited due to the stressful nature of the ED. Hospitals with higher ED volumes might score lower even though their quality might be the same or better than hospitals with lower ED volumes. Such variation in star ratings, not based on the quality of a hospital itself, reflects a weakness of the star rating system.	Mark D. Birdwhistell, *Vice President for Administration and External Affairs*, UK HealthCare	Trudi Matthews 859-218-5595	Health System	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Vizient strongly urges CMS to not include in the scoring, irrespective of timeframe, measures reported on Hospital Compare that the agency has delayed or retired (i.e., stroke measures). Specifically, we are concerned that including measures in the scoring that hospitals are no longer required to collect may reduce hospital engagement with the ranking. Vizient believes that once a measure has been removed from the methodology or the Hospital Inpatient Quality Reporting Program (IQR), it should not continue to be reported on Hospital Compare or included in Overall Star Rating calculations – even those using historical performance data.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report
9/27/2017	Measure Inclusion	Additionally, Vizient would like to take this opportunity to share concerns and recommendations from our members regarding the 30-day readmission measures. As stated by CMS, NQF and others, factors influencing readmissions are blurred between providers and patients the further a patient is from their initial discharge. While Vizient is in strong support and encouraged by the efforts CMS has made to incorporate not only social determinants of health into their risk adjustment models, but also in stratifying providers by the number of disproportionate share patients and dual-eligible patient, Vizient believes these limited enhancements would only continue to provide misleading information on how well a patient will be cared for post-discharge.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	In turn, Vizient offers the following readmission measure recommendations for CMS's consideration; and Vizient strongly encourages CMS to suspend or retire the current 30-day readmission measure in favor of the adjustments to the measure and methodology provided herein. Incorporation of socioeconomic status/social demographic status (SES/SDS) factor risk adjustment and hospital stratification are cornerstone for any viable readmission measure and simply must be added to provide meaningful adjustment and insights to the vast array of hospitals providing care. Creating separate risk models for the different hospital cohorts, instead of the one hierarchical logistical model for all hospitals, with the inclusion of SES/SDS risk factors, will not only improve the currently poor performing risk model (c-statistic < 0.7), but also increase actionability and meaningfulness of the measures. Additionally, to further advance the CMS readmission measure, Vizient recommends CMS consider a 7-day post-discharge window, instead of the current 30-day window. During many Vizient-led member-driven readmission performance improvement projects, the greatest opportunities for inpatient acute care providers to impact readmissions appeared within the 3- to 7-day post discharge window where themes such as improved discharge instructions, coordination with the primary care provider and home health provider, medication management, and other contributing factors appear. Beyond that 7-day window, provider opportunities become less clear and factors such as SES/SDS can weigh more heavily on the 30-day measures.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Further, Vizient strongly encourages alignment with time periods, Agency for Healthcare Research and Quality (AHRQ) methodology, and measures across all CMS programs when possible. Vizient also would encourage CMS to reconsider the inclusion of the AHRQ Composite measure, PSI-90. Vizient recognizes the importance of the individual AHRQ Patient Safety Indicators as measures of quality performance but we do not believe that the PSI-90 composite is an actionable measure for hospitals nor is it an accurate indicator of quality outcomes. Further, we believe PSI-90 should be removed from the Overall Star Rating given that it will be removed from the Hospital Value-Based Purchasing and Hospital Acquired Condition Reduction Programs per the FY 2018 IPPS Final Rule.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report
9/27/2017	Measure Inclusion	The validity of the Star Rating is predicated on two assumptions. The first is that the current science of quality measurement is such that all measures used in the Star Rating program are reflective of true hospital quality; we believe the Star Rating includes a number of metrics that are not good indicators of overall quality and are insufficient for comparing hospital performance (e.g. the PSI-90 Composite -see enclosed JAMA commentary).	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report
9/27/2017	Measure Inclusion	In addition, we would urge CMS to evaluate the measures within the outcomes group to consider their clinical significance (see our comments above on the PSI-90 metric) and whether appropriate risk adjustment is applied.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	On the topic of inclusion of future measures, we would ask that CMS only consider metrics that are endorsed by the National Quality Forum for consideration in the Star Rating. As noted above, we are concerned that the ratings include unreliable metrics. We believe NQF endorsement should be a litmus test for including metrics in the Star Rating, and any metric used by consumers to assess hospital quality.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report
9/27/2017	Measure Inclusion	we note that each hospital's overall rating is constructed from different quality measures depending on applicability, availability, or volume of the construct underlying each quality measure. It strikes us as counterintuitive to ignore measures because of low volume given a sizeable literature linking higher volume to better quality. Better, we believe, would be to list the number of predefined thresholds a hospital meets for a given condition or procedure	Mark Fontana, Ph.D., *Senior Data Scientist,* Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery	fontanam@hss.edu	Hospital	Please refer to the Summary Report
9/27/2017	Measure Inclusion	The AAMC urges CMS to exclude from the scoring measures reported on Hospital Compare that CMS has delayed or retired. We are concerned about including measures in the scoring that hospitals are no longer required to collect. In addition, we believe that when a measure has been removed from the IQR, it should not continue to be reported on Hospital Compare or included in the Overall Star rating calculations.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	The AAMC recommends removing the PSI-90 when determining Star ratings. MedPAC and academic researchers have noted serious deficiencies with the PSI-90 measure, which include the following concerns regarding the components of PSI-90: susceptible to surveillance bias; may not be preventable through evidence based practices; lack appropriate and necessary exclusions, some of them associated primarily with larger and academic centers; and, are based on administrative claims data so cannot capture the full scope of patient-level risk factors.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	Since the PSI-90 components focus on surgical care, teaching hospitals are more likely to be disproportionately impacted by this measure because they tend to have a larger volume of surgical cases.3 Finally, as a composite measure PSI-90 is (by design) weighted more toward some events than others, so that bias can be further magnified beyond the intrinsic limitations of an individual PSI when it is weighted more significantly in the composite. CMS has proposed a modified version of the PSI-90 composite. The AAMC has concerns that the issues cited above may continue to apply with the modified version	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Furthermore, the PSI-90 measure is highly correlated with the domain score. The TEP report contained a breakdown of the measure's relationship to the overall group score relative to the other measures within the group, which is referred to as loading. Regarding the distribution of measures in the safety domain, performance on PSI-90 was clearly the measure most strongly associated with the group score. The AAMC is very concerned that the problematic PSI-90 measure has a much higher loading score than the Centers for Disease Control (CDC) National Healthcare Safety Network (NHSN)'s measures. These measures, which are clinically validated, represented a much weaker association with the safety group score	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	The AAMC recommends removing the hospital wide readmission measure from the Star ratings until there is adequate risk adjustment. The readmission measures have been correlated with sociodemographic status (SDS) factors that are beyond the immediate control of the hospital. The high weighting of these measures in a composite could provide an inaccurate ranking.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	The Patient Safety and Adverse Events Composite (PSI-90), for instance, is a highly flawed quality measure that does not discriminate among events and fails to accurately capture what is intended. CMS has revised the measure set for the 2018 Inpatient Quality Reporting (IQR) Program, and temporarily removed it from the Hospital Value-Based Purchasing (VBP) Program for federal fiscal years 2019-2023. However, CMS has not indicated any change to this measure set in the Star Ratings. Furthermore, the PSI-90 remains a highly loaded measure, driving nearly all of the performance in the Outcome: Safety domain.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	HANYS supports the alignment and streamlining of meaningful measures across healthcare programs to ensure efficiencies and common understanding of metrics. Focusing on the Measures that Matter most for improving patient care and outcomes will achieve a sensible balance that fulfills the need to measure quality and safety, without distracting limited resources from ongoing improvement, patient care, and innovation.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	HANYS specifically supports the removal of topped out measures, which is consistent with the removal of measures policies already in place in the IQR and OQR Programs. Removing topped out measures recognizes the significant industry-wide achievement in these specific areas and encourages clinicians to focus on those measures with the greatest opportunities to improve patient care and outcomes.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Measure Inclusion	In addition, HANYS recommends that CMS strictly interpret its inclusion criteria which would eliminate the use of overlapping measures. We believe that this would necessitate the removal of the PSI-90 composite measure from the Star Ratings.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Many of the nation's best-known hospitals, including institutions that serve low-income and complex patients and that are highly rated in other quality rating reports, have received one- or two-star ratings due to the methodology. A high percentage of the star rating is allocated to measures with data reflecting performance periods two or even three years prior, which is misleading to consumers because the scores and resulting rating does not reflect current hospital performance. We urge CMS to work to mitigate the lag in reported performance to better reflect real-time quality improvement efforts by essential hospitals.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Additionally, the ratings rely heavily on the claims-based patient safety for selected indicators (PSI-90) composite measure, which fails to accurately gauge clinically relevant complications, and similar metrics. Many of our member hospitals provide high-risk procedures, such as cancer surgery, often not performed at the facilities against which they are measured; such procedures involve a higher risk of related conditions, including accidental puncture or laceration. Events captured in the PSI-90 composite measure occur disproportionately in teaching hospitals and hospitals providing highly specialized services and, therefore, are not reflective of a true difference in performance when compared with other types of hospitals. In these cases, the higher risk of infection does not reflect poor quality of care at the hospital, but rather reflects the types of procedures performed. Further, since the claims data used in calculating the PSI-90 metrics are not clinically validated, the data do not accurately represent the quality of care provided at a hospital. Hospitals can track clinically based data and monitor patients' progress based on the entirety of their clinical record. Placing excessive emphasis on claims-based data does not reliably represent a hospital's progress in improving quality. CMS should remove the PSI-90 composite measure from the overall star rating system.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Measure Inclusion	Additionally, we have concerns about including Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey data in the calculation of overall star ratings. America's Essential Hospitals analyzed CMS' June 2015 publicly reported star ratings of HCAHPS patient experience data collected from October 1, 2013, to September 30, 2014. Our analysis found that certain types of hospitals- specifically, larger hospitals, teaching hospitals, and hospitals serving a high proportion of low income patients- were more likely than others to receive lower star ratings. Research also has shown a greater likelihood of low HCAHPS scores from patients admitted via the emergency department (ED), as patient-provider interactions often are more limited due to the stressful nature of the ED.5 Hospitals with higher ED volumes might score lower even though their quality might be the same or better than hospitals with lower ED volumes. Such variation in star ratings, not based on the quality of a hospital itself, reflects a weakness of the star rating system.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
8/29/2017	Measure Groups	My comment is that the title of the mortality group should be changed to Survival. When the scores were flipped, they were also flipped to show survival not mortality. Anyone looking at the results will think that a Mortality "Above the national average" is not good. It is good. Survival above the national average sounds good and is good.	Andrea B. Ryan, RN, MSN, CPPS, *Senior Outcomes Manager*, MedStar Washington Hospital Center	Andrea.Ryan@Medstar.net	Individual	Please refer to the Summary Report

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9/25/2017	Measure Groups	Thank you for the opportunity to comment on the Star rating. My only comment, while not quite from within the parameters set out, is this.: I believe that the Measure Group Mortality should have its name changed to Survival or something similar. When the metric calculation was changed to make 'higher better', it changed the nature of the metric. On our Star rating, our mortality shows as 'above the national average'. Mortality statistics generally imply number of people who die. Being 'above average' is not where one wants to be for mortality but is really where one wants to be for survival. Thank you for your consideration.	Andrea B. Ryan, RN, MSN, CPPS, *Senior Outcomes Manager*, MedStar Washington Hospital Center	Andrea.Ryan@Medstar.net	Individual	Please refer to the Summary Report
9/27/2017	Domain Star Ratings	Provide stars for each measure group as you do for different dimensions of HCAHPS. As a final recommendation on this subject, we strongly urge CMS/CORE to derive stars for each measure group and display them prominently with the overall star rating on Hospital Compare, just as it does for the different components of the HCAHPS overall star rating. We believe this would temper conflicting priorities among stakeholders, increase transparency, and increase value to consumers.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Domain Star Ratings	Rather than using a single composite score methodology, the AAMC recommends the development of star ratings for subsets of measures, which should ultimately be more meaningful and actionable for both consumers and providers. The measures on Hospital Compare cover a wide variety of conditions and procedures in the inpatient, outpatient, and emergency department settings; consumers may choose a hospital for a particular condition or location, and may make a different choice at another time. Consumers utilizing the website should have the final say as to which aspect of care is most significant for their specific situation. A rating that combines all of the multiple dimensional aspects into a single summary score may not provide a consumer with the information that is truly important for his or her situation. Ultimately, we are concerned that patients need multifaceted information to aid them in their healthcare choices. Distilling a large amount of information into one overall star rating will not be useful.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Customizable Star Ratings	Filtering Hospitals on Hospital Compare Due to volume concerns, we do not recommend that CMS/CORE develop star ratings based on other hospital characteristics. However, we do think consumers should be able to select hospitals for comparison on Hospital Compare based on criteria other than location, hospital type, and emergency services. Earlier, we urged CMS to provide stars for each measure group, just as it provides stars for each dimension of the overall HCAHPS star ratings. Here we recommend that Hospital Compare allow consumers to filter hospitals based on individual measure group stars. They can already compare different aspects of performance once they select a set of hospitals, but they cannot yet select hospitals based on different aspects of performance.	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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9/26/2017	Transparency & Stakeholder Engagement	We recommend that CMS immediately suspend the star ratings until the method is improved and a process is put in place to include independent audit to ensure the method is implemented correctly each time the method is changed and data is refreshed. It has been our assumption the method was being followed as described. Without some form of independent audit we will remain skeptical that future releases are in fact done correctly. The current statistical process is so complex there is no way for the hospitals to audit their own results for accuracy, making it impossible to appeal a rating. This is especially troublesome as payers and others are beginning to use these ratings for tiered contracting and other perhaps unintended uses.	Kelly Court, *Chief Quality Officer*, Wisconsin Hospital Association	608-274-1820 kcourt@wha.org	Hospital Association	Please refer to the Summary Report
9/26/2017	Transparency & Stakeholder Engagement	VCU Health also questions the use of Yale New Haven Health Services Corporation/Center for Outcomes Research & Evaluation as the sole source for Star Rating methodology development and strongly suggests a more rigorous process involving multiple inputs for modifying program methodology and measure changes.	Emily Cochran, MS, RN, *Data Science Manager,* VCU Health	emily.cochran@vcuhealth.org	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	CHA strongly supports alternative approaches to an overall 5 star rating. The complexities of an overall star rating are inherently challenging to understand and become less and less meaningful to consumers. We believe alternative approaches should be more fully vetted and considered before proceeding.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org.	Hospital Association	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	With our patient's safety and the quality of the care in mind, we want to express our concern with the overall hospital quality star rating system, including issues with its methodology and limitations that reflects the quality of care provided by hospitals such as Vidant. Vidant strongly supports a transparent process for public reporting of provider quality data; however, we also believe that this information must be reliable, valid, and useful for patients. We are concerned that that this approach places an unwarranted risk where large hospitals, teaching hospitals, and those hospitals that serve a high proportion of low-income patients will receive lower star ratings, while still providing quality care, often to the most vulnerable populations.	Michael R. Waldrum MD., MSc., MBA, *CEO*, Vidant Health	Daniel N. Van Liere Daniel.VanLiere@vidanthealth.com	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	we respectfully request that CMS • Seek independent third-party review of the methodology to ensure the ratings give patients meaningful and accurate hospital quality information and do not disproportionately disadvantage any category of hospitals.	Michael R. Waldrum MD., MSc., MBA, *CEO*, Vidant Health	Daniel N. Van Liere Daniel.VanLiere@vidanthealth.com	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	For the reasons we have outlined above, we urge CMS to suspend overall star ratings and mitigate flaws in the system's measures and methodology, thereby preventing further confusion among patients and providers and helping to ensure a meaningful and accurate assessment of quality at hospitals nationwide.	Michael R. Waldrum MD., MSc., MBA, *CEO*, Vidant Health	Daniel N. Van Liere Daniel.VanLiere@vidanthealth.com	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	The composite Star Rating also does 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 performance issues that remain current and relevant.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	HANYS urges CMS to carefully re-examine the general approach of the Star Ratings and the quality measures included. CMS should engage an industry-approved third party to review and verify the methodology and make recommendations for improvement.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	America's Essential Hospitals appreciates CMS' efforts to encourage transparency in care delivery across the entire health care industry, and we support sharing meaningful hospital quality information with patients.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	We previously voiced concern to CMS about the overall star rating methodology; we since have heard similar uncertainties and confusion from our members about the appropriateness of the methodology and selected measures, as well as the usability for patients of the overall star rating. We believe there is the distinct risk that larger hospitals, teaching hospitals, and hospitals serving a high proportion of low-income patients receive lower star ratings despite providing quality care, often to disadvantaged populations. Patients' abilities to make well-informed choices are impaired by this one size-fits-all model that does not reflect the full picture of hospital care. Flaws in the methodology, such as a lack of risk adjustment for factors outside hospitals' control, are unknown to patients when viewing an overall star rating.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	Given these significant concerns, we ask CMS to suspend the overall star rating system and consider the following comments to re-evaluate the methodology. Doing so would prevent a disproportionate effect on essential hospitals and confusion among the vulnerable populations they serve. 1. CMS should re-evaluate the appropriateness of an overall hospital star rating that oversimplifies the complex and individualized choices patients must make about their health.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	Similar to its websites for other health care facilities, CMS combines the scores of a select number of Hospital Compare measures to determine overall hospital ratings of one to five stars, with five stars being best. The intent of the star rating is to provide information patients can use when deciding where to receive care. If the information does not accurately account for health care quality or is not comprehensible and useful, it can lead to misinformed choices.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	The proposed enhancements to the methodology reflect analyses performed by CMS' long-standing contractor- the same contractor that developed the star rating system. We feel strongly that there is a need for independent third-party review and analyses of the overall star rating methodology. Through this independent review, CMS can re evaluate its methodology in an objective and transparent manner to ensure validity and appropriateness. Ultimately, hospitals and consumers expect a properly constructed rating system will provide meaningful results of the greatest use to patients, while accounting for the varying factors that affect hospitals' performance outcomes and not disproportionately disadvantaging essential hospitals.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	California hospitals are subject to a variety of hospital ratings and were the first in the country to have a star rating applied to hospital quality data and posted to a website, CalQualityCare.org. Since the initial ratings were posted, several other organizations – including CMS – have released 5 star ratings using different varying methods, time periods and measures. The growing number of 5 star ratings for hospitals continues to confuse consumers, and diverts hospital attention and resources from meaningful quality improvement efforts. These impacts are disproportionately felt by California's hospitals.	Alyssa Keefe, *Vice President Federal Regulatory Affairs*, California Hospital Association	202-488-4688 akeefe@calhospital.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	First, the Star Rating must provide information that is accurate, relevant and useful to the needs and concerns of the patient. When approached from the perspective of the patient considering a specific procedure, broad measures such as readmission and mortality rates can be misinterpreted and actually undermine more specific and useful measures related to intervention. Such broad measures that incorporate both high and low-risk procedures could be influenced by the intensity of illnesses or other factors. For instance, a hospital with special expertise in treating the most difficult and advanced cancers may have mortality or readmission figures that reflect these challenges. A patient may see these statistics and perceive a hospital as less safe. Additionally, if CMS intends to continue distributing scores across the star rating, it must provide context to consumers about the score relative to other hospitals.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	We also wish to see greater alignment between Hospital Compare and other CMS programs, additional transparency in methodological decisions and a robust stakeholder input process. Additionally, we encourage CMS to work closely with stakeholders to strengthen the accuracy of Star Rating through mathematically sound methodologies that ensure hospitals are not classified into the wrong star rating. It is our hope that input from stakeholders will lead to a rating system that uses timely data that is useful and understandable for patients while fair for all types of hospitals regardless of geography, patient mix, and complexity of service.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	We believe that CMS should engage with major academic medical centers and hospital associations to refine the methodology.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	Release your research database and provide more time for comments on technical upgrades. GNYHA has an in-house team of economists, statisticians, and analysts who routinely support regulators and legislators in the development of payment, performance measurement, and performance-based payment policies for the Medicare and Medicaid programs. Our preferred process is to replicate a proposed model and match its results so we can: a) make sure we correctly program the model, and b) evaluate the hospital-specific results to determine if the model imposes systematic risk on certain types of hospitals. Since our membership includes many safety net hospitals and academic medical centers, we are particularly mindful of their vulnerabilities. From that process we contribute technical recommendations and sometimes alternative models to policymakers. There have also been occasions when we have discovered that a model does not work as intended and offered solutions. When the first version of the hospital star ratings model was released last summer, along with the underlying data set, we replicated the model and matched its results, thereby giving us an opportunity to identify topics for consideration in refining the model, many of which were addressed in CORE's August 2017 report. Thus, we are able to provide specific recommendations regarding topics we considered last year. However, regarding potential refinements we have not previously considered, we are unable to provide specific recommendations at this time because, without CORE's research database, we cannot match the report's summary results to ensure that we are properly applying the refinements and that the refinements improve the face validity of star ratings for different types of hospitals. Therefore, we request that CORE release its	Karen Smoler Heller, *Executive Vice President*, Health Economics and Finance, Greater New York Hospital Association	Karen Smoler Heller 212-506-5408 heller@gnyha.org Amy Chin 212-554-7227 achin@gnyha.org	Hospital Association	Please refer to the Summary Report

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		research database and provide an additional comment period of at least 30 days before implementing any refinements. We also request that CORE release its research database in tandem with future request for public input.				
9/27/2017	Transparency & Stakeholder Engagement	However, should CMS continue to try to achieve a graphical representation of quality through star ratings, the FAH strongly suggests CMS further test its methodologies and hold focus groups with hospitals, physicians, patients, families and caregivers to understand how well the statistical information and displays are understood and determined to be useful by all stakeholders. The FAH also recommends that CMS convene panels of stakeholders to comment on proposed changes to methodologies and to test the understanding of star rating displays to ensure information is conveyed accurately. Any subsequent changes to the star rating methodology should ensure that patients and their families are better able to understand the differences among facilities.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	The FAH members encourage CMS to provide mock-ups of the differences in hospital scores and to hold several educational webinars on the proposed changes in the methodology before making the final decision to switch to the new k-means clustering methodology. Prior to implementing this change, hospitals should have the opportunity to review their own data run by CMS using this proposed approach. Seeing the exact data that would be displayed will provide hospitals with a better understanding of the impact of the change in display. While hospitals are studying and working to better understand the proposed change in the k-means clustering methodology, CMS should continue the suspension the current flawed star ratings.	Jayne Hart Chambers, *Senior Vice President of Quality*, Federation of American Hospitals	202-624-1522 jchambers@fah.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	The AAMC strongly supports making quality data available in an easy to understand format for patients and the public. The AAMC was a founding member of the Hospital Quality Alliance, which pushed hospitals to publicly report core process measures and later worked closely with CMS on the creation and development of the Hospital Compare website. While we support efforts for greater transparency, we believe that this information must be displayed in an appropriate fashion. A single composite rating that combines diverse quality measures, particularly those that lack clinical nuance, oversimplifies the complex factors that must be taken into account when assessing the care quality. This is particularly true for the nation's teaching hospitals that typically care for sicker and more vulnerable patients in a diverse and complex environment.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Transparency & Stakeholder Engagement	The AAMC recommends that CMS provide a more complete impact analysis of each proposal to allow additional transparency to stakeholders as they evaluate improvements to the program. We propose additional information be provided on differences in the model output as a result of each proposal as compared to the current methodology, including: The number of hospitals that change with a change (increase or decrease) in each star rating · How the proposal impacts the measure loading on each quality measure The change in the cutoff for the hospital summary score for each star rating · The number of hospitals whose ratings were winsorized · The change in the explanatory power of the model (for example, R-square) · The influence of outliers on the on clustering Further, we recommend that CMS provide an analysis after each update of the star ratings to summarize changes in each of the items above. This would promote transparency and enable stakeholders to make more meaningful recommendations on improving the methodology.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Transparency & Stakeholder Engagement	The AAMC also strongly recommends that CMS continue ongoing review for areas of improvement in future releases of the Star Ratings and convene stakeholders regularly to review the appropriateness of the current methodology.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Transparency & Stakeholder Engagement	Until CMS is able to address significant concerns with the methodology used to assign star ratings, the AAMC calls on the Administration to remove the star ratings from the Hospital Compare website. We request that CMS allow sufficient time to examine the feedback provided and make modifications to the methodology to ensure that the star ratings are accurate before publishing this information on the website. Our concerns are exacerbated by the fact that substantive errors were also made when the methodology was implemented and as a result star ratings were impacted. We remain extremely concerned about potential consequences for patients that could result from painting an overly simplistic picture of hospital quality with the star rating system. We believe it is imperative that CMS contract with independent outside experts to review the methodology and verify its accuracy.	Janis M. Orlowski, MD, MACP, *Chief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report
9/18/2017	Out of Scope	• A hospital and the public it serves has to live with older data for years, that may not be reflective of current great initiatives. • Hospitals are surveyed by State and Federal Regulators and that should be the mechanism for correction.	Tim Cerullo, *Market CEO*, Bayfront Health Port Charlotte and Punta Gorda	timothy.cerullo@bayfronthealth.com	Individual	Please refer to the Summary Report
9/25/2017	Out of Scope	Finally, although the following is not a true “measure” per se, we think it would be nice if CMS could risk-adjust for dual Medicare/Medicaid eligibility (an indicator of low socioeconomic status) among mortality/readmission measures and hip/knee complications. This type of risk-adjustment may reduce the need for stratification by increasing the comparability of smaller, community-based hospitals and larger, academic medical centers.	Lisa M Panzarello, *Project Manager*, P4P/Quality Oversight Department, University of Pittsburg Medical Center	Linda Harvey harveyls@upmc.edu	Medical University	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Out of Scope	Patient experience is an important part of care quality. HANYS appreciates CMS' intent to include patient experience in various quality programs through use of hospital performance on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. However, the HCAHPS survey must be improved in a variety of ways to be able to truly capture patient experience during a hospital stay. Until these changes have been made, it is unfair to include the current HCAHPS data in the Star Ratings. In addition, CMS continues to publish a separate HCAHPS Star Rating, which is confusing to the public.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Out of Scope	HANYS previously provided comments to CMS about how to modernize the HCAHPS survey: 1. Assess HCAHPS' effectiveness in measuring hospital performance on patient satisfaction. To ensure the survey instrument captures patient experience information that is meaningful to patients and actionable for providers, HANYS urges CMS to study HCAHPS in the following areas: a. What do patients most care about? A 2016 Health Affairs article iv identified several topics not included in the HCAHPS survey that were important to patients in online reviews. These topics included caring doctors, nurses, and staff; whether the hospital was comforting; surgery outcomes; labor and delivery experience; insurance and billing; etc. CMS should conduct a thorough review of the topics that matter most to patients. The findings from such a study could inform CMS' future enhancement of HCAHPS, either to modify	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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		the instrument's questions or to adequately adjust for factors that are not related to patient care, such as costs and billing. b. How do hospital characteristics impact HCAHPS scores? Multiple research studies identified hospital characteristics that correlate with HCAHPS scores, such as care intensity, region, etc. Inadequate consideration of, and failing to account for the effects of these factors may result in unfair comparison of hospitals. HANYS recommends CMS assess the impact of non quality-related factors and consider approaches such as risk adjustment or risk stratification when necessary. c. Are there regional trends in satisfaction? New York consistently ranks among the lowest in the nation on HCAHPS, despite ongoing efforts to improve the patient experience. A review of the HCAHPS data in the CMS Overall Star Ratings finds wide geographic variation (see below); HCAHPS scores are highest in Maine, in the midwest, the center of the country, and in the northwest. HANYS believes that this variation in satisfaction crosses industries and we urge CMS to study this trend and make adjustments to the HCAHPS scoring in advance of public reporting.				

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Out of Scope	2. Modernize and improve the survey by doing the following: a. Give patients advance notice. Providing patients with advance notice of the survey will increase survey feedback, afford hospitals the opportunity to provide basic education about the survey process, and demonstrate to patients that hospitals want and value their feedback. b. Provide online and mobile surveys. Making the survey available online would improve response rates. Currently, the only approved modes of survey administration are telephone, mail, a combination of these two, or interactive voice response. These modes appear even more outdated when contrasted with a 2015 Pew Research Center study that found 73% of Americans go online on a daily basis and 21% of Americans are online "almost constantly." c. Administer the survey on-site. Currently, patients receive the survey between 48 hours to six weeks after discharge. During that time, patients' memories may fade or their priorities may shift. Hospitals should have the option of administering the survey on-site, before the patient is discharged, using tablets, kiosks, or mobile apps. This timely approach will result in more valuable feedback for the hospital and its staff.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Out of Scope	3. Adjust for survey mode. HANYS appreciates that CMS takes the efforts to account for the satisfaction variations rooted from using different survey modes. Upon adding the new survey mode recommended above, it is recommended that CMS update its survey mode adjustments by re-conducting the research to ensure HCAHPS scores are not inaccurately impacted by the way providers survey their patients. Given these many flaws, HANYS urges CMS to remove the Star Ratings from Hospital Compare. The single composite score does not provide actionable and meaningful information for patients or providers.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report
9/27/2017	Out of Scope	In addition, CMS has 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 great importance of these factors, and CMS has considered adjusting readmission measures for Medicare and Medicaid dual eligibility status in the Hospital Readmission Reduction Program (HRRP). While this adjustment is far from adequate, the healthcare provider field believes it is directionally correct. However, CMS' Star Ratings methodology has not adopted such 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 VBP programs: • Consider inclusion of other SDS risk factors. The U.S. Centers for Disease Control and Prevention (CDC) defines social determinants of health (SDS) as "the set of factors that contribute to the social	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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		patterning of health, disease, and illness." 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. Though constraints exist in terms of data availability 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." ii 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, co-morbidities, prior use of medical services, etc. The same approach holds promising for SDS adjustment. By influencing different aspects of risk behaviors and disease progress patterns, SDS factors might increase readmission risks at varying levels for different underlying medical conditions.				
9/27/2017	Out of Scope	On the contrary, the Star Ratings combines numerous quality measures from different timeframes, settings, and measure groups into one single rating. The composite Star Rating creates unnecessary complexity. Patients and families do not possess the clinical and statistical knowledge or the time needed to decode the Star Ratings and extract the information that is most relevant to them.	Marie B. Grause, R.N., J.D., *President*, HealthCare Association of New York State	Loretta Willis 518-431-7716 lwillis@hanys.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Out of Scope	we respectfully request that CMS • Only include in the hospital overall star rating methodology measures that accurately reflect quality of care, and the agency should risk adjust the measures to account for the sociodemographic factors, which complicate care for vulnerable patients;	Michael R. Waldrum MD., MSc., MBA, *CEO*, Vidant Health	Daniel N. Van Liere Daniel.VanLiere@vidanthealth.com	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Out of Scope	We are concerned that the CMS star rating methodology does not adequately risk adjust measures to account for the sociodemographic factors, which complicate care for vulnerable patients. Large hospitals, teaching hospitals, and hospitals serving a high proportion of low-income patients may be at risk for lower star ratings due to factors that are unrelated to the quality of the care they provide. The overall star rating methodology does not account for hospitals that serve highly complex patients with significant sociodemographic challenges and that perform a greater number of complex surgeries. Without proper risk adjustment, hospital systems such as UK HealthCare serving a disproportionate share of lower-income patients with confounding sociodemographic factors might be rater lower for reasons outside its control. As noted by the National Academies of Sciences, Engineering, and Medicine in its series of reports on accounting for social risk factors in Medicare programs, "achieving good outcomes (or improving outcomes over time) may be more difficult for providers caring for patients with social risk factors precisely because the influence of some social risk factors on health care outcomes is beyond provider control". We believe it is unfair to rank hospitals based on characteristics that are unrelated to the quality and value of care provided, but rather are associated with social determinants of health that are not under the control of our hospital or clinicians.	Mark D. Birdwhistell, *Vice President for Administration and External Affairs*, UK HealthCare	Trudi Matthews 859-218-5595	Health System	Please refer to the Summary Report

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9/27/2017	Out of Scope	We are further concerned about the lack of risk adjustment for patient social risk factors in quality measures. We are encouraged by CMS' interest in this topic as expressed in the FY2018 Proposed IPPS Rule (see 82 FR 19796), and hope that CMS will take adjustment for social risk factors into consideration as it continues to refine the Rating.	Jordan Shapiro, *Healthcare Informatics*, BJC HealthCare Center for Clinical Excellence	jordan.shapiro@bjc.org	Health System	Please refer to the Summary Report

Date Posted	Measure Set or Measure	Text of Comments	Name, Credentials, and Organization of Commenter	Email Address	Type of Organization	Recommendation /Actions
9/27/2017	Out of Scope	Over the past several years, a substantial amount of literature has recognized the impact of SDS factors on patient outcomes.4,5 Recent reports released by the Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine (NAM) on accounting for social risk factors in the Medicare performance programs have provided evidence-based confirmation that accounting for patients' sociodemographic and other social risk factors is critical in validly assessing the quality of providers. The reports demonstrate that providers caring for large numbers of disadvantaged patients are more likely to receive penalties in the performance programs and that the lack of SDS adjustment can worsen health care disparities because the penalties divert resources away from providers treating large proportions of vulnerable patients. The failure to account for SDS variables also is misleading and confusing to patients, payers, and policymakers because it shields them from important community factors that contribute to poor health outcomes. Finally, as noted by ASPE, the cumulative effect of the penalties across the Medicare performance and penalty programs could significantly hinder the work of those institutions that disproportionately serve beneficiaries with social risk factors. Both reports clearly show that there are implementable mechanisms by which SDS data elements can be incorporated into quality measurement today.	Janis M. Orlowski, MD, MACP, C*hief Health Care Officer,* Association of American Medical Colleges	Gayle Lee galee@aamc.org Matt Baker mbaker@aamc.org	Hospital Association	Please refer to the Summary Report

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9/27/2017	Out of Scope	Essential hospitals treat a high proportion of patients with social risk factors that are outside the control of the hospital- including lack of transportation for follow-up care and limited access to nutritious food-that can affect health outcomes. The overall star rating methodology does not account for hospitals that serve highly complex patients with significant sociodemographic challenges and that perform a greater number of complex surgeries. Without proper risk adjustment, an essential hospital serving a disproportionate share of lower-income patients with confounding sociodemographic factors might be rated lower for reasons outside its control.2 Further, excluding these factors will lead to inaccurate and misleading ratings, as evidenced by the public release of the ratings thus far.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Out of Scope	Further, outcome measures in the overall star rating- especially those focused on readmissions- do not accurately reflect quality of care if they do not account for sociodemographic factors, including socioeconomic status, that can complicate outcomes. For example, patients who do not have a reliable support structure are more likely to be readmitted to a hospital or other institutional setting. America's Essential Hospitals, in previous comments on hospital inpatient quality reporting programs, urged CMS to consider the sociodemographic factors-language and existing level of post-discharge support, for example-that might affect patients' outcomes and include such factors in the risk-adjustment methodology. We made these comments out of a preponderance of evidence that patients' sociodemographic status affects outcomes of care.6 CMS should appropriately risk adjust outcomes measures in the overall star rating system to account for sociodemographic factors, including socioeconomic status.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Out of Scope	As required by the Improving Medicare Post-Acute Care Transformation Act, the Department of Health and Human Services' Office of the Assistant Secretary for Planning and Evaluation in December 2016 released a report in which the connection between social risk factors and health care outcomes is clear.8 The report provides evidence-based confirmation of what essential hospitals and other providers have long known: Patients' sociodemographic and other social risk factors matter greatly when assessing the quality of health care providers.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Out of Scope	Further, as noted by the National Academies of Sciences, Engineering, and Medicine in its series of reports on accounting for social risk factors in Medicare programs, "achieving good outcomes (or improving outcomes over time) may be more difficult for providers caring for patients with social risk factors precisely because the influence of some social risk factors on health care outcomes is beyond provider control."9 We urge CMS to re-evaluate the overall star rating methodology in light of new evidence and changes to risk-adjustment in the hospital quality reporting programs. We also urge the agency to ensure the rating system appropriately accounts for hospitals treating patients with social and economic challenges.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Out of Scope	Most recently, in the fiscal year 2018 Inpatient Prospective Payment System rule, CMS finalized a transitional risk adjustment methodology for the Hospital Readmissions Reduction Program that allows separate comparison of hospitals based on a facility's proportion of dual-eligible patients; this comparison is used as a proxy for socioeconomic status. However, stratification is not risk adjustment and more work must be done to account for social risk factors across Medicare programs.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report

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9/27/2017	Out of Scope	Many of the nation's best-known hospitals, including institutions that serve low-income and complex patients and that are highly rated in other quality rating reports, have received one- or two-star ratings due to the methodology. A high percentage of the star rating is allocated to measures with data reflecting performance periods two or even three years prior, which is misleading to consumers because the scores and resulting rating does not reflect current hospital performance. We urge CMS to work to mitigate the lag in reported performance to better reflect real-time quality improvement efforts by essential hospitals.	Bruce Siegel, MD, MPH, *President and CEO,* America's Essential Hospitals	Erin O'Malley 202-585-0127 eomalley@essentialhospitals.org	Health System	Please refer to the Summary Report
9/27/2017	Out of Scope	I don't understand why time periods overlap. I recommend yearly. This would give facilities time to show their improvements. A fresh start =)	Shelly Demello, RN, *Quality Management and CDI/Core Measure Manager*, Hilo Medical Center	808-932-2556 sdemello@hhsc.org	Individual	Please refer to the Summary Report
9/27/2017	Out of Scope	Approximately 64 percent of the overall score is allocated to measures with data reflecting a 2-year old performance period. As this data does not accurately reflect current hospital performance, Vizient has concerns that the Overall Star Rating could be misleading to consumers and patients. Specifically, the Mortality, Readmission and other highly weighted variables are based on data that is at least 2 years old, does not reflect actual performance, limiting true performance improvement outcomes assessment. Vizient recommends CMS consider incorporating more current data in the ranking to minimize potential misperception of current hospital performance.	Shoshana Krilow, *Vice President of Public Policy and Government Relations,* Vizient, Inc.	Chelsea Arnone chelsea.arnone@vizientinc.com	Healthcare Performance Improvement Company	Please refer to the Summary Report

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9/27/2017	Out of Scope	HLC strongly supports CMS efforts to incentivize quality through outcome-based measurement, and believes the current system of measurement requires substantial revision to properly account for both medical complexities of patients as well as the socioeconomic challenges that providers face in caring for patients. HLC is a coalition of chief executives from all disciplines within American healthcare that serves as the exclusive forum for the nation's healthcare leaders to jointly develop policies, plans, and programs to achieve their vision of a 21st century system that makes affordable, high-quality care accessible to all Americans. Members of HLC – hospitals, academic health centers, health plans, pharmaceutical companies, medical device manufacturers, biotech firms, health product distributors, pharmacies, laboratories, post-acute care providers, and information technology companies – envision a quality-driven system that fosters innovation. HLC members advocate measures to increase the quality and efficiency of American healthcare by emphasizing wellness and prevention, care coordination, and the use of evidence-based medicine, while utilizing consumer choice and competition to enhance value.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report

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9/27/2017	Out of Scope	Second, CMS must accurately measure and account for differences in socioeconomic factors among patient populations. It is important to accurately adjust a Star Rating for socioeconomic status to appropriately incentivize alternative payment arrangements that can best support care for patients with socioeconomic challenges. There is enormous disparity in readmissions – in particular between patients who have sufficient socioeconomic support and those who do not. Without adequate measurement and adjustment, efforts to reward higher performing providers may result in lower funding for those serving the most vulnerable. By working closely with experts in the private sector, a system that appropriately reflects health system challenges – such as the social and economic status of consumers – can create a more accurate payment system.	Mary R. Grealy, *President*, Healthcare Leadership Council	Tina Grande 202-449-3433 tgrande@hlc.org	Leadership Council	Please refer to the Summary Report

Appendix A. Tables and Figures from Commenters

Methodology Enhancement

Table 1. Missouri Hospital Association

Proposed Star Rating by Sociodemographic Measures		All Hospital	Star Rating					% Difference
		Average	1 Star	2 Star	3 Star	4 Star	5 Star	1 vs 5
	Count of Hospitals	3647	248	722	1304	1086	287	
Home ZIP Code-Level	Unemployment Rate	9.813	12.7	11.0	9.9	8.9	7.9	61%
	Percent Non-White	24.765	44.0	30.9	23.5	19.3	21.0	109%
	Percent Age 25+ Less Than High School	14.315	17.5	16.1	15.1	12.7	10.1	73%
	Poverty Rate	13.298	18.0	15.2	13.5	11.7	10.0	44%
	Median Household Income	$50,262	$46,090	$48,075	$48,615	$52,156	$59,054	-22%
	Percent Vacancy Rate	11.790	12.3	11.4	11.9	12.0	10.7	15%
	Socioeconomic Deprivation Index	0.097	0.471	0.255	0.135	-0.035	-0.253	154%
Hospital Mix-Level	SSI Ratio	733.437	1282.702	951.799	728.607	540.343	462.094	178%
	DSH Percent	0.303	0.443	0.350	0.307	0.256	0.183	142%
	Uncompensated Care per Claim	688.864	1442.205	880.329	626.906	471.648	410.559	251%

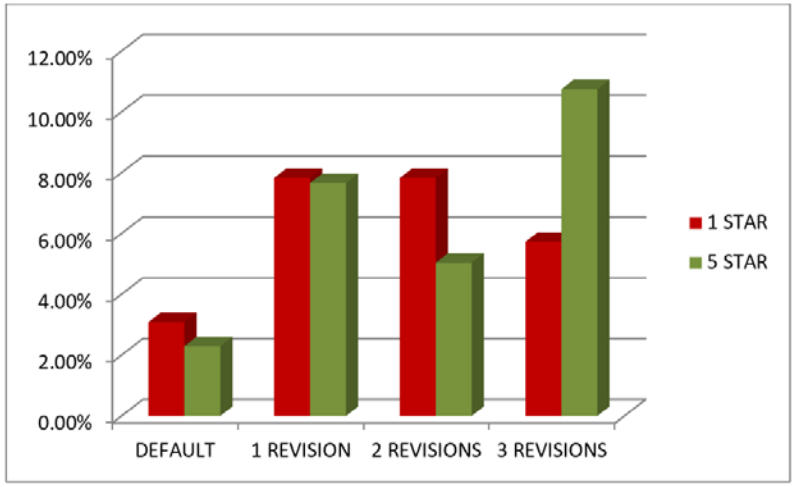
Table 2. Missouri Hospital Association

Proposed Star Rating by Hospital Characteristics		All Hospital	Star Rating					% Difference
		Average	1 Star	2 Star	3 Star	4 Star	5 Star	1 vs 5
	Count of Hospitals	3647	248	722	1304	1086	287	
Data Availiable	Number of Domains	6.7	6.9	6.8	6.6	6.7	6.4	8%
	Number of Measures	46.1	53.7	49.8	44.3	44.8	43.7	23%
Volume and Severity	Staffed Beds	203.3	307.3	235.9	179.2	186.5	170.0	81%
	Average Census	117.6	198.5	142.0	98.8	104.7	94.3	110%
	Transfer-Adjusted Cases	2,965	3,776	3,354	2,588	2,897	2,932	29%
	Outlier Payment % Total Operating Cost	3.9%	5.4%	4.4%	3.6%	3.7%	3.4%	57%
	% Large Urban	34.2%	56.0%	42.4%	29.3%	28.8%	37.6%	49%

Table 3. Missouri Hospital Association

Hospital Overall Star Rating Change 2016 to 2017 vs Key Indicators		All Hospital Average	Lost 1 Star in Update	Remained the Same	Gained 1 Star in Update
	Count of Hospitals	3647	550	2850	246
Home ZIP Code-Level	Percent Unemployed	9.8	8.9	9.9	11.4
	Percent Non-White	24.8	20.1	25.0	33.0
	Percent Age 25+ Less Than High School	14.3	12.8	14.4	16.4
	Poverty Rate	13.3	11.5	13.4	15.8
	Median Household Income	$50,262	$53,428	$49,890	$47,194
	Percent Vacant	11.8	12.2	11.7	12.2
	SED Index	0.10	-0.05	0.11	0.31
Patient Mix-Level	SSI Ratio	733.4	541.1	750.9	952.4
	DSH Percent	0.30	0.25	0.31	0.36
	Uncompensated Care per Claim	688.9	478.8	701.7	923.6
Data Availability	Number of Domains	6.7	6.6	6.7	6.8
	Number of Measures	46.1	43.6	46.3	50.5
Volume and Severity	Staffed Beds	203.3	190.3	201.2	248.2
	Average Census	117.6	106.6	116.3	151.5
	Transfer-Adjusted Cases	2965	2960	2921	3439
	Outlier Payment % of Total Operating Payments	3.9%	3.7%	3.9%	4.4%
	% Large Urban	34.2%	28.7%	34.7%	40.2%

Figure 1. John Bott



"DEFAULT": Current methodology
"1 REVISION": Complete convergence
"2 REVISIONS": Complete convergence + without winsorization
"3 REVISIONS": Complete convergence + without winsorization + with resequencing

Figure 2. Vizient

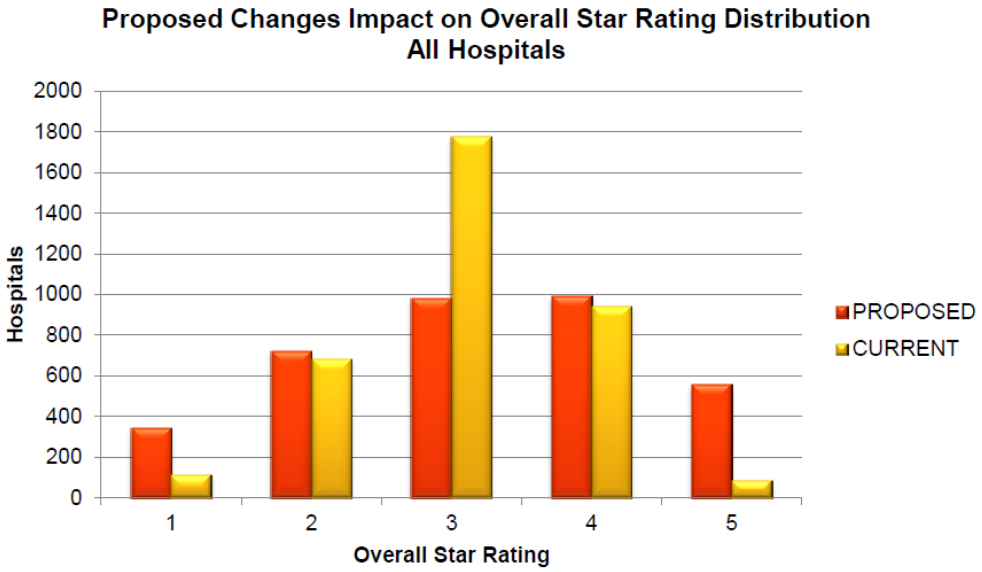
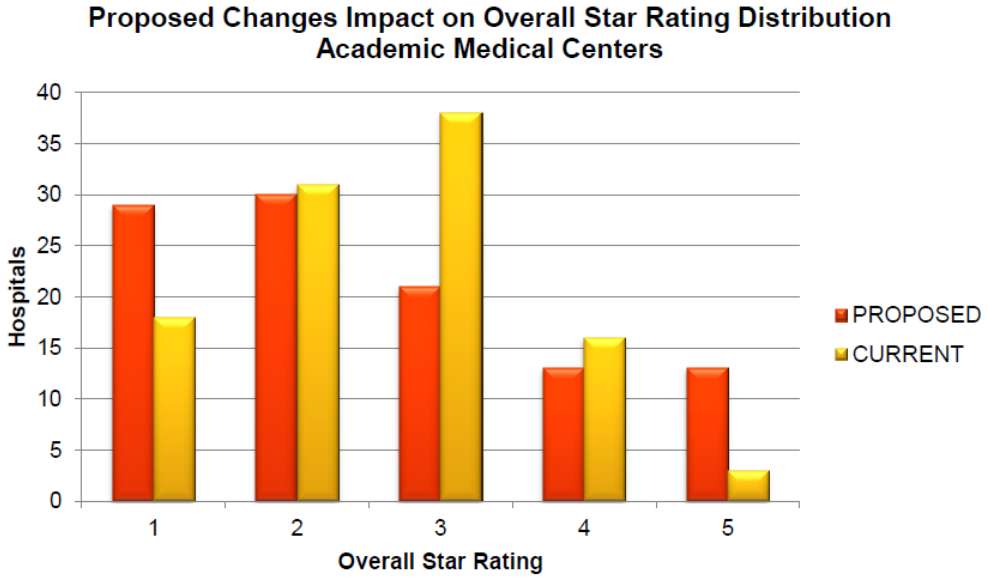


Figure 3. Vizient



Resequencing Reporting Threshold

Figure 4. Vizient

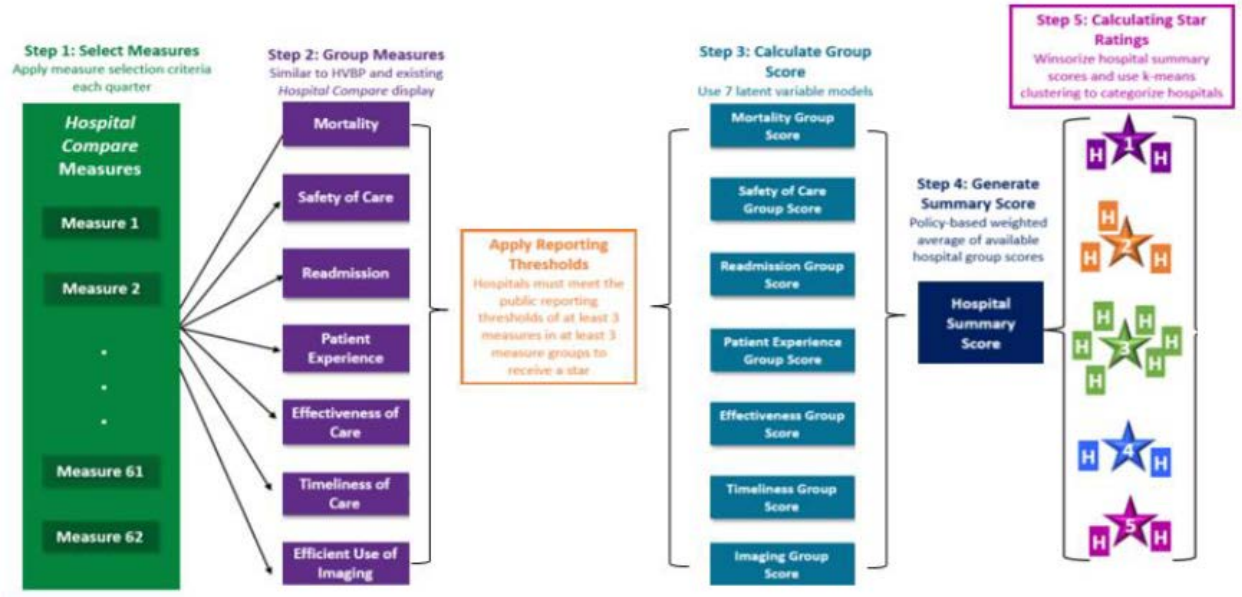


Table 4. Association of American Medical Colleges

	Star Rating					
	5 Stars	**4 Stars**	**3 Stars**	**2 Stars**	**1 Stars**	**All with a Star Rating**
Total # (%) of hospitals	102 (2%)	927 (20%)	1752 (38%)	707 (15%)	129 (3%)	3,617 (100%)
# (%) of hospitals that have scores in the following number of performance domains						
7 Domains	53 (2%)	590 (25%)	1,087 (46%)	548 (23%)	111 (5%)	2,389
6 Domains	4 (1%)	114 (27%)	209 (49%)	87 (20%)	15 (3%)	429
5 Domains	7 (3%)	82 (32%)	140 (55%)	26 (10%)	0 (0%)	255
4 Domains	8 (3%)	76 (30%)	147 (57%)	24 (9%)	1 (0%)	256
3 Domains	30 (10%)	65 (23%)	169 (59%)	22 (8%)	2 (1%)	288

AAMC-calculated results of the July 2016 Hospital Compare release

Measure Group Weighting

Table 5. University of Pittsburg Medical Center

Measure Group	Proposed Star Rating Weight
Mortality	20%
Safety of Care	15%
Readmission	15%
Patient Experience	20%
Effectiveness of Care	10%
Timeliness of Care	10%
Efficient Use of Medical Imaging	10%

Table 6. Massachusetts General Hospital and Massachusetts General Physicians Organization

Measure	Current Weight %	MGH Proposed Weight %
Safety	22	18
Patient Experience	22	26
Mortality	22	26
Readmission	22	18
Effectiveness of Care	4	4
Timeliness of Care	4	4
Efficient Use of Medical Imaging	4	4

Table 7. Association of American Medical Colleges

Measure Group	Current Weight	Recommended Weight
Mortality	22%	30%
Safety of Care	22%	18%
Readmission	22%	18%
Patient Experience	22%	22%
Effectiveness of Care	4%	4%
Timeliness of Care	4%	4%
Efficient Use of Medical Imaging	4%	4%

Table 8. Greater New York Hospital Association

Domain	Measure Group	Current	Alt. 1	Alt. 2	Alt. 3
Quality	Mortality	22%	20%	25%	**30%**
	Safety of care	22%	20%	15%	**20%**
	Effectiveness of care	4%	8%	8%	**5%**
	Timeliness of care	4%	8%	8%	**5%**
	Subtotal	52%	56%	56%	**60%**
Efficiency	Readmission	22%	20%	15%	**15%**
	Efficient use of medical imaging	4%	4%	4%	**5%**
	Subtotal	26%	24%	19%	**20%**
Patient ex.	Patient experience	22%	20%	25%	**20%**

Table 9. Adventist Health System

Measure Group	Number of Measures Reported by Hospital	Standard Rating Weights	Redistributed Hospital Measure Group Weights
Mortality	3	22%	29.33%
Safety of Care	1	22%	22%
Readmission	2	22%	22%
Patient Experience	0	22%	-----
Effectiveness of Care	4	4%	11.33%
Timeliness of Care	6	4%	11.33%
Efficient Use of Medical Imaging	2	4%	4%

Table 10. Robert Raggi

Mortality=25%
Safety of Care=15%
Readmission=15%
Patient Experience=20%
Effectiveness of Care=10%
Timeliness of Care=10%
Efficient Use of Medical Imaging=5%

Table 11. Vizient

Measure Group	Current Weight %	Vizient Proposed Weight %
Safety	22	20
Patient Experience	22	20
Mortality	22	18
Readmission	22	18
Effectiveness of Care	4	10
Timeliness of Care	4	10
Efficient Use of Medical Imaging	4	4

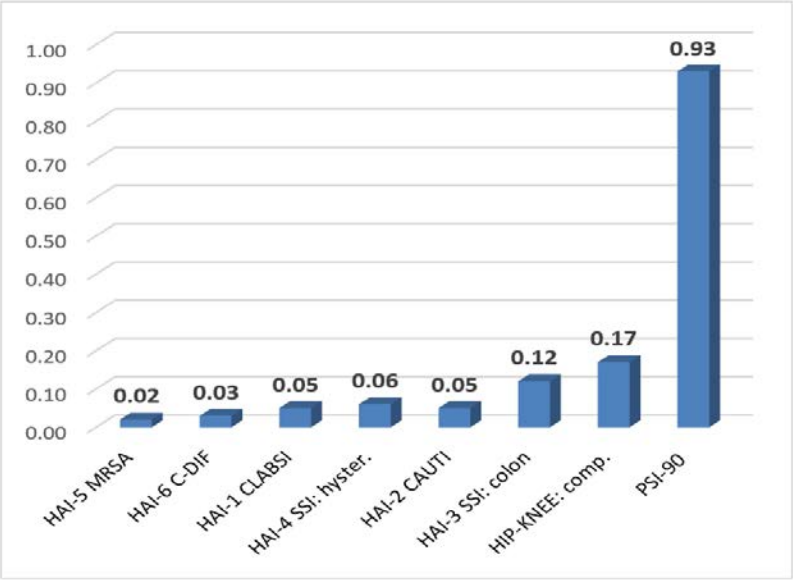
Measure Inclusion

Table 12. Missouri Hospital Association

Table 3 Summary Findings of CMS Overall Hospital Star Rating Sensitivity Analysis		Base CMS Model		Complete Domain Model		PSI-90 Exclusion Model		HWR Exclusion Model		Complete Domain, PSI-90 and HWR Exclusion Model	
		n	%	n	%	n	%	n	%	n	%
Distribution of Ratings	1 star	141	3.1%	75	2.5%	203	4.5%	105	2.3%	121	4.0%
	2 star	769	16.9%	445	14.9%	1,074	23.6%	675	15.0%	666	22.2%
	3 star	2,505	55.1%	1,196	39.9%	2,522	55.5%	2,520	55.9%	1,340	44.8%
	4 star	1,014	22.3%	1,128	37.7%	677	14.9%	1,093	24.2%	763	25.5%
	5 star	121	2.7%	150	5.0%	72	1.6%	117	2.6%	104	3.5%
	Total	4,550	100.0%	2,994	100.0%	4,548	100.0%	4,510	100.0%	2,994	100.0%
Distribution of Stars Gained or Lost	Lost 2 stars	-	-	0	0.0%	22	0.5%	2	0.0%	12	0.4%
	Lost 1 star	-	-	0	0.0%	1,076	23.7%	221	4.9%	501	16.7%
	No Change	-	-	2,123	70.9%	3,198	70.3%	3,830	84.9%	1,892	63.2%
	Gained 1 star	-	-	871	29.1%	248	5.5%	454	10.1%	553	18.5%
	Gained 2 stars	-	-	0	0.0%	4	0.1%	3	0.1%	35	1.2%
	Gained 3 stars	-	-	0	0.0%	0	0.0%	0	0.0%	1	0.03%
	Total Movement	-	-	871	29.1%	1,350	29.7%	680	15.1%	1,102	36.8%
Kappa		-		0.5743		0.5212		0.754		0.4548	
Weighted Kappa		-		0.6913		0.6288		0.8087		0.5828	

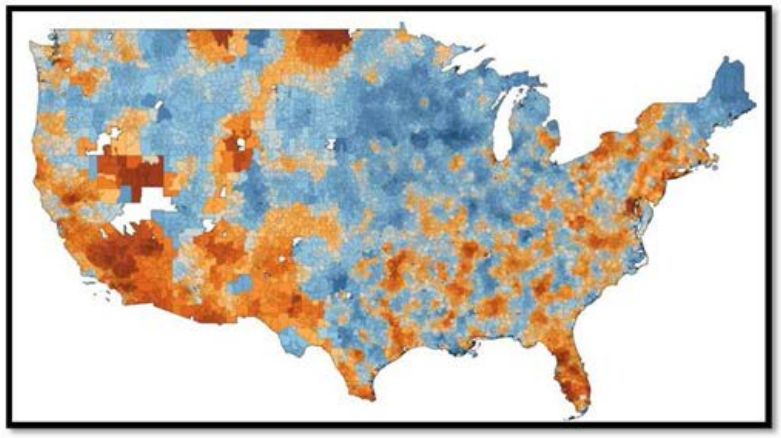
Source: Hospital Industry Data Institute calculations of CMS star ratings data for all hospitals used in the star calculations (i.e., not just those meeting reporting criteria)

Figure 5. John Bott



Out of Scope- HCAHPS

Figure 6. Healthcare Association of New York State



HANYS' Analysis of Regional Variation in Patient Experience Data. *Source: CMS Overall Star Ratings SAS Package. December 2016 release*