

National Consensus Development and Strategic Planning for Health Care Quality Measurement

Fall 2024 Cycle Endorsement and Maintenance (E&M) Technical Report

Cost and Efficiency

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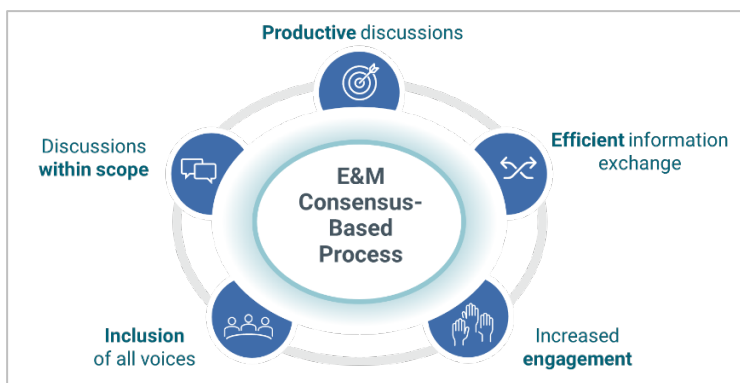
Executive Summary

For over 2 decades, the United States (U.S.) has focused on improving health care quality for Americans. One of the ways this has been done is by developing and implementing clinical quality measures to quantify the quality of care provided by health care providers and organizations. These clinical quality measures are based on standards related to the effectiveness, safety, efficiency, person-centeredness, and timeliness of care.¹

At Battelle, we have a strong collective interest in ensuring that the health care system works as well as it can. Health care professionals use quality measures to support health care improvement, benchmarking, and accountability of health care services and to identify weaknesses, opportunities, and disparities in care delivery and outcomes.^{1,2}

Battelle is a certified consensus-based entity (CBE) funded through the Centers for Medicare & Medicaid Services (CMS) National Consensus Development and Strategic Planning for Health Care Quality Measurement Contract. As a CMS-certified CBE, we facilitate the review of quality measures for endorsement. Battelle's Partnership for Quality Measurement (PQM) members support consensus-based processes by serving on committees, ensuring informed and thoughtful reviews of quality measures across a range of focus areas aligned with a person's journey through the health care system. Battelle engages PQM members to carry out the consensus-based E&M process, which relies on robust and focused discourse, efficient information exchange, effective engagement, and inclusion of a multitude of voices that represent the health care community (Figure 1).

Figure 1. E&M Consensus-Based Process

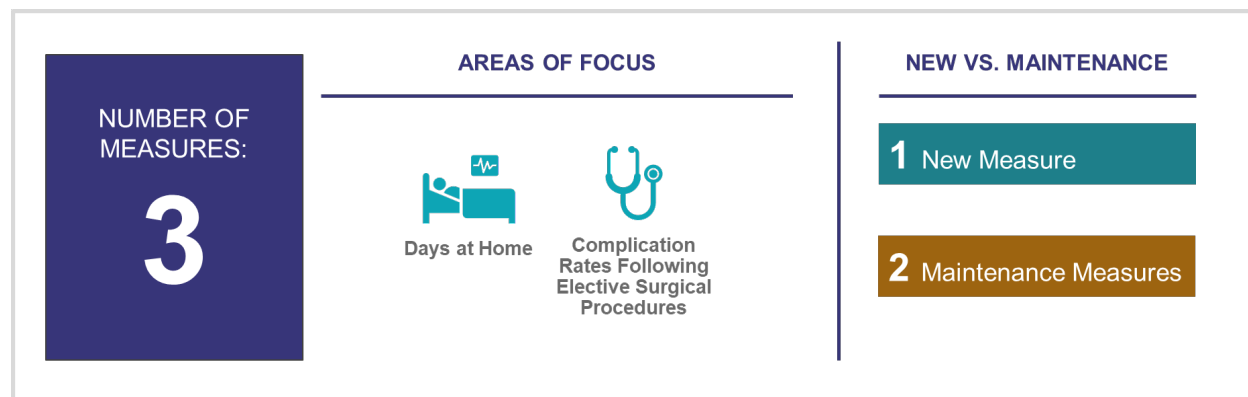


One of those focus areas is cost and efficiency, which includes measures that focus on health care resource use and spending. Efficient health care delivery is vital for improving patient outcomes and reducing costs. Making health care delivery more efficient involves addressing key areas such as hospital readmissions and complications from elective surgical procedures. In the U.S., health care spending reaches \$4.9 trillion annually, with nearly 14% of hospital stays followed by readmissions.³ Reducing readmissions enhances patient wellbeing, lowers costs, and optimizes resource use.^{4,5} Increasing days at home also reduces costs and boosts patient mobility.⁶ These outcomes highlight the importance of effective post-discharge care. Surgical complications affect 20% of patients, with reductions linked to lower spending and better patient outcomes.⁷

For this measure review cycle, developers submitted four measures to the Cost and Efficiency committee for endorsement consideration based on the PQM Measure Evaluation Rubric within version 1.2 of the [E&M Guidebook](#). One measure steward withdrew a maintenance measure (Table 5). Of the three remaining measures reviewed by the committee (Figure 2), the committee did not reach consensus on all three measures, which resulted in the measures not being endorsed.

Table 1. Measures Reviewed by the Cost and Efficiency Committee

CBE Number	Measure Title	New/Maintenance	Developer/Steward	Final Endorsement Decision
#1550	Hospital-Level, Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	Maintenance	Yale Center for Outcomes Research and Evaluation (Yale CORE)/CMS	Not Endorsed due to No Consensus
#2879e	Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data	Maintenance	Yale CORE/CMS	Not Endorsed due to No Consensus
#4555	Days at Home for Patients with Complex, Chronic Conditions	New	Yale CORE/CMS	Not Endorsed due to No Consensus

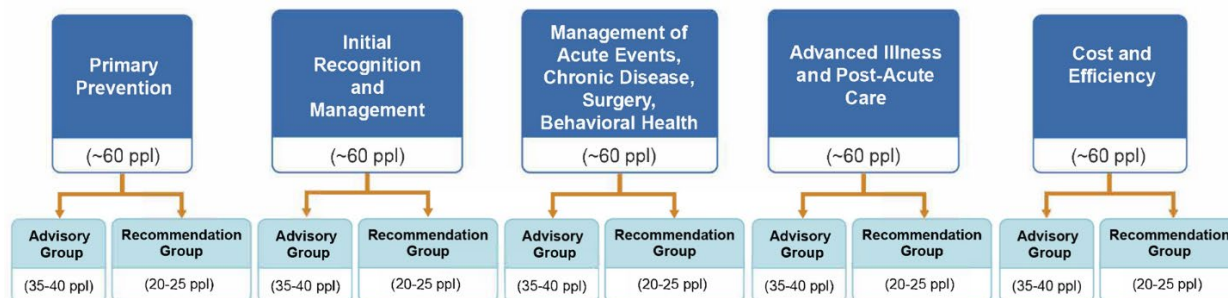
Figure 2. Fall 2024 Measures for Committee Review

Endorsement and Maintenance (E&M) Overview

Battelle's E&M process ensures that measures submitted for endorsement are evidence based, scientifically sound, and both safe and effective. This means that the use of the measure will increase the likelihood of desired health outcomes, will not increase the likelihood of unintended adverse health outcomes, and is consistent with current professional knowledge.

We organize measures for E&M by [five project areas](#). Each project topical area has a committee that evaluates, discusses, and assigns endorsement decisions for measures under endorsement review. These E&M committees are composed of diverse PQM members, representing all facets of the health care system. Each E&M committee is divided into an Advisory Group and a Recommendation Group (Figure 3).

Figure 3. E&M Committee Structure



The goal is to create inclusive committees that balance experience, expertise, and perspectives. The E&M process convenes and engages interested parties throughout the cycle. The interested parties include those who are impacted or affected by quality and cost/resource use who come from a variety of places and represent multiple perspectives (Figure 4).

Figure 4. E&M Interested Parties



For the Cost and Efficiency committee, membership for the Fall 2024 cycle consisted of 10 patient partners (i.e., patients, caregivers, advocates) and nine clinicians, with specialties in emergency medicine, internal medicine, and others (Figure 5). The committee also included six population health experts.

While a list of committee members is provided in

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[Appendix A](#), full committee rosters and bios are on the respective project pages on the [PQM website](#).

At the beginning of each E&M cycle, committee members complete a measure-specific disclosure of interest (MS-DOI) form identifying potential conflicts with the measures under endorsement review for the respective E&M cycle. Members are recused from voting on measures potentially affected by a perceived conflict of interest (COI) based on Battelle’s [COI policy](#).



Figure 5. Cost and Efficiency Committee Members

Within the 49 **Cost and Efficiency Committee** members are:

- 11 **Patient** Partners
- 16 **Clinician** Members
- 4 **Population Health Experts**

Each E&M cycle (i.e., Fall or Spring) has a designated Intent to Submit deadline, when measure developers/stewards must submit key information (e.g., measure title, type, description, specifications) about the measure. One month after the Intent to Submit deadline (Table 2), measure developers/stewards submit the full measure information by the respective Full Measure Submission deadline.

Table 2. Intent to Submit and Full Measure Submission Deadlines by Cycle

E&M Cycle	Intent to Submit*	Full Measure Submission*
Fall	October 1	November 1
Spring	April 1	May 1

**Deadlines are set at 11:59 p.m. (ET) of the day indicated. If the deadline falls on a weekend or holiday, the deadline will be the next immediate business day.*

We then publish measures to the PQM website for a 30-day public comment period, which occurs prior to the endorsement meeting and concurrently with the development of the staff preliminary assessments. The intent of this 30-day comment period is to solicit both supportive and non-supportive comments with respect to the measures under endorsement review. Any interested party may submit a comment on any of the measures up for endorsement review for a given cycle (i.e., Fall or Spring). Prior to the close of the public comment period, we host a Public Comment Listening Session to gather additional public comments on the measures; this virtual session is organized by project with measures grouped by topic/condition. Any interested party may attend to give a brief spoken statement on one or more of the measures.

We post all public comments received during this 30-day period, including those shared during the Public Comment Listening Sessions, to the respective measure page on the [PQM website](#). A summary of the comments received for the measures submitted to Cost and Efficiency for the Fall 2024 cycle is [below](#).

Following the Public Comment Listening Sessions, we convene the Advisory Group of each E&M project during a public virtual meeting. The purpose of these meetings is to gather initial feedback and questions about the measures under endorsement review. Developers/stewards are given the opportunity to share written responses to Advisory Group feedback after these meetings. They can also provide written responses to any public comments received directly on

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the measure's webpage. This process ensures comprehensive input and engagement from all interested parties involved. For the Cost and Efficiency committee, the Advisory Group convened on [December 3, 2024](#), and we published a summary of the member feedback and developer/steward responses on the [PQM website](#).

Prior to the Recommendation Group endorsement meeting, we share the full measure submission details, including all attachments, the PQM Measure Evaluation Rubric, the staff preliminary assessments, the public comments, Advisory Group feedback, and the developer/steward responses with the Recommendation Group for review. The Cost and Efficiency Recommendation Group convened on [February 10, 2025](#). Brief summaries of the Recommendation Group deliberations and voting results are provided [below](#), while a detailed meeting summary is available on the [PQM website](#).

During the endorsement meeting, the Recommendation Group focuses their discussions on key themes identified from the public comments, the Advisory Group meetings, the associated developer/steward responses, independent reviews, and the staff preliminary assessments. Measure developers/stewards attend endorsement meetings to provide a measure overview and answer questions from the Recommendation Group. The Recommendation Group considers the various inputs and renders a final endorsement decision via a vote. Consensus is reached when there is 75% or greater agreement among all active, non-recused Recommendation Group members (Table 3). However, if no consensus is reached, the measure is not endorsed due to no consensus.

Table 3. Endorsement Decision Outcomes

Decision Outcome	Description	Maintenance Expectations
Endorsed	Applies to new and maintenance measures. The E&M committee agrees by 75% or more to endorse the measure.	Measures undergo maintenance of endorsement reviews every 5 years with a status report review at 3 years (see Evaluations for Maintenance Endorsement for more details).[±] Developers/stewards may request an extension of up to 1 year (two consecutive cycles), except if it has been more than 6 years since the measure's date of last endorsement.
Endorsed with Conditions*	Applies to new and maintenance measures. The E&M committee agrees by 75% or greater that the measure can be endorsed as it meets the criteria, but committee reviewers have conditions they would like addressed when the measure comes back for maintenance. If these	Measures undergo maintenance of endorsement reviews every 5 years with a status report at 3 years, unless the condition requires the measure to be reviewed earlier (see

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Decision Outcome	Description	Maintenance Expectations
	recommendations are not addressed, the developer/steward should provide a rationale for consideration by the E&M committee review.	Evaluations for Maintenance Endorsement for more details). The E&M committee evaluates whether conditions have been met, in addition to all other maintenance endorsement minimum requirements.
Not Endorsed ^o	Applies to new measures only. The E&M committee agrees by 75% or greater to not endorse the measure.	None
Endorsement Removed ^o	Applies to maintenance measures only. Either: • The E&M committee agrees by 75% or greater to remove endorsement; or • A measure steward retires a measure (i.e., no longer pursues endorsement); or • A measure steward never submits a measure for maintenance, and the steward does not respond after targeted outreach; or • There is no longer a meaningful gap in care, or the measure has topped out (i.e., no significant change in measure results for accountable entities over time).	None

±Maintenance measures may be up for endorsement review earlier if an emergency/off-cycle review is needed (see [Emergency/Off-Cycle Reviews](#) for more details).

*The E&M committee determines the conditions, with the consideration of what is feasible and appropriate for the developer/steward to execute by the time of maintenance endorsement review.

^oMeasures that fail to reach the 75% consensus threshold are not endorsed.

The “Endorsed with Conditions” category serves as a means of endorsing a measure but with conditions set by the Recommendation Group. These conditions take into consideration what is feasible and appropriate for the developer/steward to execute by the time of maintenance endorsement review.

After the E&M endorsement meeting, committee endorsement decisions and associated rationales are posted to the PQM website for 3 weeks, which serves as the appeals period. During this time, any interested party may request an appeal regarding any E&M committee endorsement decision. If a measure’s endorsement, including an “Endorsed with Conditions” decision, is being appealed, the appeal must:

- Cite evidence of the appellant’s interests that are directly and materially affected by the

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measure, and provide evidence that the CBE's endorsement of the measure has had, or will have, an adverse effect on those interests; and

- Cite the existence of a CBE procedural error or information that was available by the cycle's Intent to Submit deadline but was not considered by the E&M committee at the time of the endorsement decision, which is reasonably likely to affect the outcome of the original endorsement decision.

In the case of a measure not being endorsed, the appeal must be based on one of two rationales:

- The CBE's measure evaluation criteria were not applied appropriately. For this rationale, the appellant must specify the evaluation criteria they believe were misapplied.
- The CBE's E&M process was not followed. The appellant must specify the process step, how it was not followed properly, and how this resulted in the measure not being endorsed.

If Battelle determines that an appeal is eligible, we convene the Appeals Committee, consisting of the co-chairs from all five E&M project committees (n=10), to review and discuss the appeal. The Appeals Committee concludes its review of an appeal by voting to uphold (i.e., overturn a committee endorsement decision) or deny (i.e., maintain the endorsement decision) the appeal. Consensus is determined to be 75% or greater agreement via a vote among members.

For the Fall 2024 cycle, the appeals period opened on March 4 and closed on March 24, 2025. The measures reviewed by the Cost and Efficiency committee all received an appeal.

Cost and Efficiency Measure Evaluation

For this measure review cycle, the Cost and Efficiency committee evaluated one new measure and two measures undergoing maintenance review against standard [measure evaluation criteria](#). During the Recommendation Group endorsement meeting, the committee did not reach consensus on all three measures, which resulted in the measures not being endorsed (Table 4).

Table 4. Number of Fall 2024 Cost and Efficiency Measures Submitted and Reviewed

	Maintenance	New	Total
Number of measures submitted for endorsement review	3	1	4
Number of measures withdrawn from consideration*	1	0	1
Number of measures reviewed by the committee	2	1	3
Number of measures endorsed	0	0	0
Number of measures endorsed with conditions	0	0	0
Number of measures not endorsed/endorsement removed	2	1	3

*Measure developers/stewards can withdraw a measure from measure endorsement review at any point before the committee endorsement meeting. Table 5 provides a summary of withdrawn measures.

Table 5. Measures Withdrawn from Consideration

Measure Number	Measure Title	Developer/ Steward	New/ Maintenance	Reason for Withdrawal
1891	Hospital 30-Day, All-cause, Risk-Standardized Readmission Rate (RSRR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	Yale CORE/CMS	Maintenance	Withdrawn by steward and deferred to Fall 2025 cycle

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Public Comments Received Prior to Committee Evaluation

Battelle accepts comments on measures through the PQM website. For this evaluation cycle, the public comment period opened on November 15, 2024, and closed on December 16, 2024, during which time we hosted a Public Comment Listening Session on November 21, 2024. The measures received seven public comments, and we published the comments to the respective measure pages on the [PQM website](#). If the measure received any comments, the [measure's evaluation summary](#) includes a summary of these comments. The developer/steward responds to public comments on the comments tab of each [measure page](#) on the PQM website.

Summary of Potential High-Priority Gaps

During the committee's evaluation of the measures, committee members identified gap areas for future development and endorsement considerations.

Expanding Complications and Applicability Across Diverse Care Settings

The Cost and Efficiency committee discussed limited applicability across diverse health care settings for CBE #1550. For example, the exclusion of outpatient surgery centers and non-hospital settings in the measure may limit its relevance and utility. The committee expressed the need for measures to accurately reflect patient outcomes across various care settings to ensure that they are comprehensive and inclusive of all patient experiences. The committee noted that overlooking significant outcomes that occur post-discharge in non-traditional care settings can result in an incomplete view of patient health and recovery.

Limited Use

The Cost and Efficiency committee discussed issues related to limited use for CBE #4555. They noted that the measure denominator only counts patients attributed to a Realizing Equity, Access, and Community Health Accountable Care Organization (REACH ACO). This could result in healthier patients who are not attributed to a REACH ACO, and potential manipulation of coding of the hierarchical condition category (HCC) scores.

Summary of Major Concerns

The following brief summaries of the measure evaluation highlight the major concerns the committee considered.

Data Integration and Standardization

During their review of CBE #2879e, the Cost and Efficiency committee discussed the challenge of integrating and standardizing data from various sources, such as claims and electronic health records (EHR). The complexity of merging these data sources can lead to inconsistencies and inaccuracies and negatively impact reliability and validity of the measures. Additionally, a lack of uniformity in data collection and reporting practices across different health care settings can hinder the measures' applicability and effectiveness.

Summary of Methodological Issues

The following brief summaries of the measure evaluation highlight the methodological issues

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that the committee considered.

Reliability and Low-Volume Providers

In the discussion of CBE #1550, committee members voiced concern that the scores of low-volume providers may be misleading to patients because they are adjusted to the average. Low-volume providers are more likely to perform at the lower end of the of the volume-quality association.

Risk Adjustment and Social Determinants

The Cost and Efficiency committee identified the lack of adjustment for social risk factors as a critical gap that affects measures' ability to capture the diverse needs of patient populations. Without accounting for these factors, the measures may not fully represent the challenges faced by different demographic groups, potentially leading to skewed results and inequitable care. The committee indicated that addressing this gap is essential for developing measures that are fair and reflect the needs and circumstances of all patients. While CBE #4555 has adjustment for social risk at the payment level, the committee encouraged the developer to explore additional community factors, such as the availability of ambulatory surgical centers (ASCs) for CBE #1550 and other community resources for CBE #4555.

Measure Evaluation Summaries

CBE #1550 – Hospital-Level, Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) [Yale CORE/CMS] – Maintenance

[Specifications](#) | [Discussion Guide](#)

Description: The measure estimates a hospital-level risk-standardized complication rate (RSCR) associated with elective primary THA and/or TKA procedures for Medicare patients (Fee-for-Service [FFS] and Medicare Advantage [MA]) aged 65 and older. The outcome (complication) is defined as any one of the specified complications occurring from the date of index admission to up to 90 days after the index admission. Complications are counted in the measure only if they occur during the index hospital admission or during a readmission. The complication outcome is a dichotomous (yes/no) outcome; if a patient experiences one or more of these complications in the applicable time period, the complication outcome for that patient is counted in the measure as a “yes.”

Committee Final Vote: Not Endorsed due to No Consensus on issues related to:

- The case mix of patients, including that the decision to treat inpatient versus outpatient is discretionary and that not all patients may have access to ASCs.
- The overall approach of adjusting low-volume provider performance to the average.

Vote Count: Endorse (3 votes; 20%), Endorse with Conditions (8 votes; 53%), Remove Endorsement (4 votes; 27%); recusals (0).

Summary of Public Comments: Battelle received two comments prior to the meeting. The American Medical Association suggested a case minimum of 25 individuals should be required as part of this measure’s endorsement. The 25-case minimum would also ensure reliability estimates are closer to 0.7, which one of the commenters suggested to be the standard for endorsed measures. The other comment was from the Center for Healthcare Quality Payment and Reform, with which one of the Cost and Efficiency Recommendation Group members is affiliated. The commenter recommended this measure have its endorsement removed, citing major concerns with the measure’s validity, numerator and denominator (inclusion and exclusion criteria), risk-adjustment methodology, reliability, and overall lack of business case.

Summary of Measure Evaluation: This maintenance measure was last reviewed for endorsement in the Fall 2020 cycle. It is currently in use with CMS’s Hospital Inpatient Quality Reporting Program.

Discussion Topic/Theme	Committee Discussion Summary
Limited Scope	• The Recommendation Group noted, as the measure only includes inpatient complications, it excludes outpatient surgery centers, urgent care centers, and non-routine office visits. They noted the measure’s relevance and utility for patients treated outside of hospitals may be limited. • The Recommendation Group also indicated that the measure does not capture all complications and all TKA and THA procedures. A subject

Discussion Topic/Theme	Committee Discussion Summary
	matter expert (SME) affiliated with the developer noted that the measure includes significant complications requiring inpatient care. • The developer acknowledged the measure's limitations and will discuss expanding to other settings with CMS. They argued that separate measures for inpatient and outpatient settings enhance patient decision-making. • The Recommendation Group expressed contrasting views on addressing the issue of care settings, with some members advocating for the use of separate, complementary measures by setting, while others argued for a comprehensive measure capturing all complications regardless of setting. • The developer emphasized the measure's focus on patients with higher-risk of complications and mentioned an existing outpatient measure for complications leading to hospitalization within 7 days post-procedure. • The Recommendation Group further questioned the usefulness of the measure given that knee and hip procedures are not on the Medicare FFS inpatient-only list for hospitals, and most of these procedures are outpatient, occurring in a hospital or an ambulatory surgical center. They expressed concerns about the measure's applicability and reliability due to the shift from inpatient to outpatient settings, noting that some organizations have adjusted their methodology to include outpatient data for performance improvement.
Case Mix and Elective Procedures	• The Recommendation Group discussed several circumstances that might potentially affect case mix and measure outcomes. For example, facilities with same-day surgery centers likely have a different case mix compared to those without these. Additionally, the shift from inpatient to outpatient settings for elective procedures often directs healthier patients to ambulatory surgical centers, leaving individuals in acute-care hospitals, which could also affect case mix. • The SME noted that in communities without ASCs, the patient would be treated in the hospital outpatient department (HOPD) and would not be counted in this measure. Those having the procedure inpatient must meet certain criteria, which is thus a smaller cohort of people.
Reliability and Low-Volume Providers	• The Recommendation Group noted the public comment that the need for a minimum case volume of 25 is a measure implementation decision rather than a measure endorsement decision. • The Recommendation Group expressed concern about low-volume providers' scores potentially being misleading to patients due to these scores being adjusted to the average and, thus, not being flagged as "poor performers." They noted that the developer's validity testing analysis indicates a volume-quality association, with low-volume providers more likely to perform at the lower end. They suggested two potential solutions: 1) change the method such that the method considers and analyzes volume; or 2) make sure the measure is not publicly reporting low-volume providers and making them look like average performers when they are

Discussion Topic/Theme	Committee Discussion Summary
	not. They noted that expanding the number of providers in the measure does not lead to increased capture of complications. The developer stated that their goal is to make performance scores available for as many providers as possible while trying to avoid misclassifying or profiling providers. They shared that for facilities with less than 25 cases, CMS states that the scores are not available because the number of cases is too small.
Range of Variation	- The Advisory Group discussed the range of variation, with some members noting that the performance gap seemed fairly small and others observing changes in performance over time. - The developer acknowledged that performance gap has improved, but it is also narrowing so the range became smaller. They suggested that the range of variation in the measure score still shows a meaningful quality gap, given that the outcome rate is relatively low; they stated that small improvements in the outcome can be clinically meaningful.
Risk Adjustment for Social Determinants	- The Recommendation Group and the Advisory Group discussed the exclusion of social risk factors from the risk-adjustment model, citing the importance of being able to account for community resources and patient access to care. They noted that social determinants may also impact surgeons' or the hospitals' decision to perform the procedure. - The developer indicated that they assessed the impact of risk factors on this measure by correlating the measure scores when calculated with and without the risk factors. The correlation was very high, suggesting an adjustment at the quality measure level was not necessary. - Some Recommendation Group members suggested using stratification to assess such differences as opposed to relying on the risk adjustment. - The developer stated that they did not stratify the identified social risk factors for this measure due to the small sample size, which is a technical limitation.

Appeals: Yale CORE, the measure developer, submitted an appeal for CBE #1550. In their appeal, Yale CORE posits that measure evaluation criteria were misapplied and procedural errors occurred. Yale CORE referenced [tables and figures](#) from their measure submission as supporting evidence. Battelle staff and the Cost and Efficiency co-chairs deemed this appeal to be eligible and moved the appeal forward to the Appeals Committee for the reasons included below.

1. Misapplication of Measure Evaluation Criteria

- **Risk Adjustment:** The committee overemphasized factors beyond the Scientific Acceptability domain risk adjustment sub-criteria, which led to an incorrect interpretation of the testing data. The measure's risk model, accounting for clinical risk, performs well without additional variables. The shift to more outpatient procedures has created a uniform risk population, and the model accurately predicts risks in the current setting. Measure specifications align with care delivery and inpatient application. The minimum

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case volume for public reporting ensures accurate representation of low-volume providers, and the developer used hierarchical regression modeling to estimate performance.

- **Battelle Response:** The measure's risk adjustment methods are appropriate, have good model performance, and meet PQM criteria, as evidenced by the staff assessment for the Scientific Acceptability (Validity) domain. In addition, the minimum case volume identified by the developer is sufficient to meet the defined threshold of 0.60 for accountable entity-level reliability. Further investigation into a potential misapplication of criteria is warranted.

2. Procedural Errors

- **Excessive Focus on the Outpatient Setting:** The Recommendation Group discussion focused excessively on the exclusion of outpatient setting procedures, which is outside the scope of the specified inpatient measure. This was a procedural error, as it distracted from the core issues around the measure.
- **Battelle Response:** Committees should evaluate the measure's safety and effectiveness as specified. Meeting discussions should remain productive, within scope, and inclusive of all voices. Further investigation into a potential procedural error is warranted.

During the Appeals Meeting, Battelle staff introduced CBE #1550 and the developer's appeal. During the endorsement meeting, the Recommendation Group was one vote short (73%) of an Endorsed with Conditions decision, resulting in the measure being Not Endorsed due to No Consensus. The Recommendation Group considered two conditions for the measure: 1) the developer should explore the proportion of procedures done in the ASC/HOPD setting and evaluate the need for adjustment (e.g., risk, stratification) and how these might impact case mix and 2) the developer should explore additional approaches to the reliability assessment to account for low-volume facilities. Should the Appeals Committee uphold the appeal, the conditions discussed during the endorsement meeting would be placed on the measure.

Discussion Topic/Theme	Appeals Committee Discussion
Procedural Error – Excessive Focus on the Outpatient Setting	• The appellant (Yale CORE, measure developer) emphasized that while they value measures for both inpatient and outpatient settings, the discussion on outpatient setting availability and its impact on the endorsement decision was out of scope. The committee's concerns are adequately addressed within the risk model, which has been shown to perform well and is designed for the patients who are the highest risk in an inpatient setting. • The Cost and Efficiency patient co-chair acknowledged that, due to the complexity and volume of the information during the endorsement meeting, it was difficult to understand what was in scope versus out of scope. • The Cost and Efficiency non-patient co-chair was not in attendance but provided written feedback ahead of the meeting. His remarks indicated surprise at the exclusion of outpatient surgeries from the measure and noted community concerns about differing case mixes between institutions. • Several members supported the view that the focus on outpatient settings was a procedural error. They emphasized the need for separate measures for inpatient and outpatient care due to differing risk profiles.

Discussion Topic/Theme	Appeals Committee Discussion
	Another member noted the need to consider outpatient settings due to evolving health care practices and suggested evaluating the risk adjustment model empirically to address selection bias. Battelle staff highlighted that one of the conditions for the measure is to explore the proportion of procedures done in the ASC/HOPD setting and evaluate the need for adjustment.
Misapplication of Evaluation Criteria – Risk Adjustment	- Battelle staff noted that the developer provided evidence via tables and figures in their measure submission showing the risk model sufficiently accounts for clinical risk. The Recommendation Group did not discuss the C-statistic value but noted concerns that the methods used to adjust for low-volume providers could potentially distort actual performance. - The appellant explained the measure addresses the issue of low-volume providers through both a minimum case threshold and the use of a shrinkage estimator, a statistical method which adjusts raw performance estimates toward the overall average, effectively mitigating statistical noise and reliability issues associated with low-volume providers. - Several members agreed that the risk adjustment was sufficient and the discussion around alternative settings may have skewed the committee into believing that there was a further need to adjust for risk.

The Appeals Committee voted to uphold the appeal for CBE #1550, overturning the initial endorsement decision and defaulting the measure to “Endorsed with Conditions.”

Appeals Vote Count:

- Misapplication of Criteria: 8 (100%) Uphold the Appeal, and 0 (0%) Do not Uphold the Appeal.
- Procedural Error: 8 (100%) Uphold the Appeal, and 0 (0%) Do not Uphold the Appeal.

Additional Recommendations for the Developer/Steward: Several Recommendation Group members encouraged the developer and CMS to explore having the measure assess all settings and all complications or having separate complementary measures for different settings. In addition, Recommendation Group members suggested that the developers explore the proportion of procedures done in the ASC/HOPD setting and evaluate the need for adjustment (e.g., risk stratification) based on impact to case mix. Lastly, the Recommendation Group suggested that the developers explore additional approaches (e.g., borrowing strength) for the reliability assessment to account for low-volume facilities.

CBE #2879e – Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data [Yale CORE/CMS] – Maintenance

[Specifications](#) | [Discussion Guide](#)

Description: Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data measures facility-level risk-standardized rate of readmission (RSRR) within 30 days of discharge from an inpatient admission, among Medicare Fee-For-Service (FFS) and Medicare Advantage (MA) patients aged 65 years and older. Index admissions are divided into five groups based on their reason for hospitalization (e.g., surgery/gynecology, general medicine, cardiorespiratory, cardiovascular, and neurology); the final measure score (a single risk-standardized readmission rate) is calculated from the results of these five different groups, modeled separately. Variables from administrative claims and electronic health records are used for risk adjustment.

Committee Final Vote: Not Endorsed due to No Consensus on issues related to:

- Burden to providers with respect to collecting and reporting of certain electronic data elements vs. the overall value.
- All-cause approach and whether the 30-day window includes a significant degree of readmissions that are unrelated and/or out of the control of the hospital compared to a potential and more actionable time frame of 7 days.

Vote Count: Endorse (2 votes; 13%), Endorse with Conditions (9 votes; 56%), Remove Endorsement (5 votes; 31%); recusals (0).

Summary of Public Comments: Battelle received four comments prior to the meeting. One comment from the Center for Healthcare Quality Payment and Reform, with which one of the Cost and Efficiency Recommendation Group members is affiliated, recommended endorsement be removed from this measure due to major concerns with the measure's validity, numerator and denominator (inclusion and exclusion criteria), risk-adjustment methodology, reliability, and overall lack of business case. Two comments expressed concern related to validity and reliability due to the measure specifications not aligning with current clinical workflows. A comment expressed concern over the readmission window, stating that 30 days is too long to provide actionable and meaningful feedback, and suggested the developer reassess the utility and acceptability of the 30-day window. Additionally, the comment raised concern over the double counting of patients across similar measures.

Summary of Measure Evaluation: This maintenance measure was last reviewed for endorsement in the Full Year 2015 cycle. It is currently in use within CMS's Hospital Inpatient Quality Reporting Program.

Discussion Topic/Theme	Committee Discussion Summary
Usability and Feasibility and the Challenges with EHR Data Collection	• The Recommendation Group and Advisory Group discussed the usability and feasibility of the measure, with several members expressing concerns about the burden of extracting EHR core clinical data elements (CCDE) across health systems. This discussion led committee members to question the measure's value and impact on readmission.

Discussion Topic/Theme	Committee Discussion Summary
	- The developer indicated that the measure aims to improve the claims-only measure by adding EHR data. At the recommendation of a developer-convened technical expert panel, the developer chose the CCDE because they are routinely collected and are clinically relevant. The process of collecting CCDE is automated, and while extracting CCDE requires ongoing monitoring and adjustments, the process has improved year over year. - The Recommendation Group questioned the return on investment and resource use of current EHR elements, suggesting they may not significantly enhance information beyond coded comorbidities.
Risk Adjustment and Social Determinants	- The Recommendation Group and Advisory Group discussed risk adjustment, with members questioning the decision to not include social determinants in risk adjustment or stratification. - The Advisory Group considered the use of CCDEs for risk adjustment and acknowledged that the C-statistic for risk adjustment model of the CCDE Medicine cohort is acceptable but lower than other categories of patients. They inquired whether this C-statistic is sufficient. - The developer provided information on some of their analysis and stated that risk adjustment for these social risk factors may mask meaningful differences in the treatment of vulnerable populations. They indicated that testing for stratification of risk factors is ongoing. - The developer stated that C-statistics and model overfitting for all specialty cohorts, including the Medicine cohort, were in acceptable ranges for a readmission measure.
Concerns About All-Cause Readmissions	- The Recommendation Group discussed their concerns that the measure is all-cause, noting that some of the reasons for readmission may be out of the control of the hospital; the Recommendation Group said they believed the 30-day window, rather than a narrower time frame, increases the likelihood of capturing readmissions outside of the hospital's control. - The developer provided additional context for the measure, stating that the measure applies to all acute care hospitals in the U.S., including critical access and small rural hospitals. They indicated that the 30-day period is a useful metric in capturing the risk of readmission, which does not return to baseline until beyond 30 days. The developer noted that the measure was developed after the implementation of condition-specific measures for readmissions, which led to reductions in both readmissions and admissions without increasing mortality. - The developer agreed to look at the Recommendation Group suggestion of a 7-day period, rather than the 30-day, in a future review.
Measure Results for Medicare Advantage	- The Advisory Group discussed potential differences in measure results for Medicare Advantage (MA) patients, who were recently added to the measure's target population. - The developer shared findings, which showed some differences in risk factors for MA patients; however, when adjusted in the risk model,

Discussion Topic/Theme	Committee Discussion Summary
	readmission outcomes were very similar although slightly lower in the MA population. Additionally, the developer empirically found that observation rates for MA vs. FFS patients are similar.

Appeals: Yale CORE, the measure developer, submitted an appeal for CBE #2879e. In their appeal, Yale CORE argued that measure evaluation criteria were misapplied. Yale CORE referenced [tables and figures](#) from their measure submission as supporting evidence. Battelle staff and the Cost and Efficiency co-chairs deemed this appeal to be eligible and moved the appeal forward to the Appeals Committee for the reasons included below.

1. Misapplication of Measure Evaluation Criteria

- **EHR Data Elements and 30-day Readmission Capture:** Excessive weight was given to factors beyond the evaluation criteria. Empirical data supports 30-day readmission capture, and EHR data elements are feasible and usable, eliminating the need for primary data collection.
 - **Battelle Response:** The data elements are feasible, as evidenced by the eCQM Feasibility Scorecard, staff assessment for the Feasibility domain, and prior assessment of CCDE methodology as part of the initial endorsement in 2015. Further investigation into a potential misapplication of criteria is warranted.

During the Appeals Meeting, Battelle staff introduced CBE #2879e and the developer's appeal. During the endorsement meeting, the Recommendation Group was one vote short (69%) of an Endorsed with Conditions decision, resulting in the measure being Not Endorsed due to No Consensus. The Recommendation Group considered two conditions for the measure: 1) explore actionability of the measure with reporting entities (e.g., qualitative assessments, empirical analyses) and 2) to explore analyses to justify the 30-day time window. Should the Appeals Committee uphold the appeal, the conditions discussed during the endorsement meeting would be placed on the measure.

Discussion Topic/Theme	Appeals Committee Discussion
Misapplication of Evaluation Criteria – EHR Data Elements and 30-day Readmission Capture	• The Battelle staff assessment found the Feasibility and Importance domains to be met; however, the Advisory Group and public comments expressed concerns about the burden of collecting EHR data. The Recommendation Group questioned the actionability of the 30-day readmission window compared to a shorter time frame. The appeal posits a misapplication of criteria due to excessive weight given to factors beyond the evaluation criteria. • The appellant (Yale CORE, measure developer) stated that CBE #2879e met Battelle's Feasibility domain criteria and reiterated the low burden of extracting CCDEs. The developer and CMS jointly decided to use CCDEs and EHR data in response to stakeholder requests to minimize burden as they are routinely collected as a part of standard clinical care. The CCDEs are similar to other measures that have recently been re-endorsed. • The Cost and Efficiency non-patient co-chair was not in attendance but provided written feedback ahead of the meeting. His remarks stated that several committee members expressed concern about feasibility and

Discussion Topic/Theme	Appeals Committee Discussion
	accuracy of extracted data. Public comments and some members noted that not all hospitals, especially smaller rural institutions, can provide this data. The extraction of clinical elements from electronic medical records remains a work in progress. • The Cost and Efficiency patient co-chair had no further comments. • One member asked if there were concerns about the feasibility of specific data elements, to which the appellant responded that it was a global concern about the accuracy of EHR data elements and not a particular one. • One member questioned the appeal's claim that there was a misapplication of the evaluation criteria with regard to the 30-day readmission capture, noting that requesting justification of this time window is typical of a readmission measure discussion. The appellant responded that discussion of the time window would be more appropriate for initial endorsement and not for a maintenance measure. Another member supported the 30-day time frame as standard and affirmed the measure is both feasible and usable.

The Appeals Committee voted to uphold the appeal for CBE #2879e, overturning the initial endorsement decision and defaulting the measure to “Endorsed with Conditions.”

Appeal Vote Count: Misapplication of Criteria: 8 (100%) Uphold the Appeal, and 0 (0%) Do not Uphold the Appeal.

Additional Recommendations for the Developer/Steward: Several Recommendation Group members discussed exploring the actionability of the measure with reporting entities. In addition, they recommended the developer consider evaluating readmissions at 7 days vs. 30 days to see if there is more statistical noise at 30 days and if the measure would be more actionable at 7 days.

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CBE #4555 – Days at Home for Patients with Complex, Chronic Conditions [Yale CORE/CMS] – New

[Specifications](#) | [Discussion Guide](#)

Description: This is an ACO-level measure of days at home or in community settings (that is, not in acute care such as inpatient hospital or emergent care settings or post-acute skilled nursing) among adult Medicare Fee-for-Service (FFS) beneficiaries with complex, chronic conditions who are attributed to ACOs participating in the ACO REACH model. The measure includes risk adjustment for differences in patient mix across ACOs, with an additional adjustment based on patients' risk of death. A policy-based nursing home adjustment that accounts for patients' risk of transitioning to a long-term nursing home is also applied to incentivize community-based care. The performance period is one calendar year.

Committee Final Vote: Not Endorsed due to No Consensus on issues related to:

- Accounting for patient access to community care resources that would impact their days at home.

Vote Count: Endorse (6 votes; 38%), Endorse with Conditions (4 votes; 25%), Do Not Endorse (6 votes; 38%); Recusals (0).

Summary of Public Comments: Battelle received one comment prior to the meeting. The comment was from the Center for Healthcare Quality Payment and Reform, with which one of the Cost and Efficiency Recommendation Group members is affiliated, and recommended the committee not endorse this measure. The commenter cited major concerns with the numerator and denominator (inclusion and exclusion criteria), risk-adjustment methodology, and reliability.

Summary of Measure Evaluation: This new measure is being reviewed for initial endorsement. The developer noted that the measure is planned for use in the CMS Innovation Center's ACO REACH Model.

Discussion Topic/Theme	Committee Discussion Summary
Variation in Performance	- The Advisory Group noted that the 10th-90th percentile variation of measure performance is low: 315 to 327 days. They inquired whether this measure captures significant variation. - The developer reported that the adjusted measure score represents days at home per person-year. The variation in performance between the 10th and the 90th percentiles of 12 days per person is not small given that it represents a count of days at home for each patient attributed to an ACO REACH Model. They stated that the marginal value of an additional day in care is very high and such a reduction in days in care is mathematically equivalent to the same increase in days at home.
Access to Care	The Recommendation Group discussed the feasibility of keeping patients at home in rural areas with smaller provider networks, questioning whether there is an urban-rural issue in relative performance. They noted the importance of adjustment based on access to community care, as patients with less access are likely to have more days in the hospital.

Discussion Topic/Theme	Committee Discussion Summary
	- The developer indicated that they only have 1 year of data and, thus, are not yet able to look at trends related to urbanicity or rurality. - The developer stated that the ACO REACH Model does not adjust for any social factors, but it does adjust for payment at the reporting and the payment level; as a result, the measure adjusts for health equity, with some consideration for geography.
Importance	The Advisory Group expressed their support of the measure as it addresses a critical area of concern for patients and their communities.
Denominator and Attribution Concerns	- A Recommendation Group member inquired why the measure does not include every Medicare beneficiary. They noted that this measure only counts patients attributed to a REACH ACO, which could lead to variability in the denominator. They indicated that healthier patients might not be attributed to a reach ACO due to making fewer hospital visits, and coding of hierarchical condition category (HCC) scores could be manipulated. They noted that the rules for when a patient is attributed to an ACO are complex. - The developer explained that the ACO REACH Model uses a prospective alignment methodology and is based on care utilized during the year prior to the measurement. They indicated that for the HCC scores, the measure is intended specifically for patients with higher needs who are at higher risk of needing acute services. - The developer noted that while the measure is specified for use in REACH ACOs, a non-REACH ACO could use the days at home measure to simply track their performance. Given the interest in the days at home measure, the developer indicated that they have conferred with the Center for Medicare and Medicaid Innovation (CMMI) about potentially expanding its use to other CMMI models and CMS programs. - The developer stated that they will discuss changing the denominator based on alignment to the model on a yearly basis with the measure steward.

Appeals: Yale CORE, the measure developer, submitted an appeal for CBE #4555. In their appeal, Yale CORE posits that measure evaluation criteria were misapplied and procedural errors occurred. Yale CORE referenced [tables and figures](#) from their measure submission as supporting evidence. Battelle staff and the Cost and Efficiency co-chairs deemed this appeal to be eligible and moved the appeal forward to the Appeals Committee for the reasons included below.

1. Misapplication of Measure Evaluation Criteria

- **Risk Adjustment:** The risk model includes variables that influence the outcome and that are present at the start of care while excluding unjustified factors associated with care inequities. The measure adjusts for dual eligibility, accounting for social risk factors, and the ACO REACH Model provides resources for coordinated care, supporting the measure's intent.
 - **Battelle Response:** As evidenced by the staff assessment for the Scientific

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Acceptability (Validity) domain, the measure's risk adjustment methods are appropriate and demonstrate variation in the prevalence of risk factors across measured entities, contribute to unique variation in the outcome, and show the impact of risk adjustment for providers at high or low extremes of risk. The model performance is acceptable. Further investigation into a potential misapplication of criteria is warranted.

2. Procedural Error

- **Out-of-scope and Insufficient Discussion:** A few voices dominated the Recommendation Group discussion and focused on out-of-scope topics (the broader population beyond Medicare FFS and ACO REACH), leaving insufficient time for an inclusive, comprehensive discussion.
 - **Battelle Response:** Committees should evaluate the measure's safety and effectiveness as specified. Meeting discussions should remain productive, within scope, and inclusive of all voices. Further investigation into a potential procedural error is warranted.

During the Appeals Meeting, Battelle staff introduced CBE #4555 and the developer's appeal. During the endorsement meeting, the Recommendation Group was two votes short (63%) of an Endorsed with Conditions decision, resulting in the measure being Not Endorsed due to No Consensus. The Recommendation Group considered two conditions for the measure: 1) explore the differences in scores for rural and urban settings and whether adjusting on these variables is needed and 2) to explore the impact of variation in attribution based on utilization (in the denominator). Should the Appeals Committee uphold the appeal, the conditions discussed during the endorsement meeting would be placed on the measure.

Discussion Topic/Theme	Appeals Committee Discussion
Procedural Error – Out-of-Scope and Insufficient Discussion	- Battelle staff noted that neither the staff assessment nor the Advisory Group identified that the developer should explore ACOs outside of the REACH Model. However, the Advisory Group did discuss ACO patient attribution. One public comment from the Center for Healthcare Quality and Payment Reform did bring the issue of including all Medicare patients forward, and Battelle staff noted that the CEO of that company is also a Recommendation Group member. - The appellant (Yale CORE, measure developer) expanded on the rationale for the appeal, emphasizing that during the endorsement meeting, few voices were heard, and notably, patients—whom Yale CORE values as co-developers of the measure—were not given an opportunity for discussion. They also highlighted the challenge of transitioning discussions from traditional health care structures to the ACO REACH Model and emphasized that the measure is not intended for all care providers but is specifically for providers in the ACO REACH Model. - The Cost and Efficiency non-patient co-chair was not in attendance but provided written feedback ahead of the meeting. His remarks indicated that the measure represents a new style of measurement and committee members were generally unfamiliar with the ACO REACH Model and its operational implementation, which may have influenced voting. - The Cost and Efficiency patient co-chair agreed with the committee's unfamiliarity with the ACO REACH Model.

Discussion Topic/Theme	Appeals Committee Discussion
	- One member inquired about the population size affected by the ACO REACH Model, to which Yale CORE clarified the model reaches about 2.5 million patients. - One member questioned the procedural error rationale, noting that broader use application discussions are a natural part of endorsement meetings and that, organizationally, the discussion moderation always calls for diverse voices to participate. Time constraints are common, but the process usually allows for all voices. - Another member disagreed, stating that if a few voices dominant the endorsement discussion that may lead to other committee members misinterpreting the scope or data.
Misapplication of Measure Evaluation Criteria – Risk Adjustment	- The appellant explained that their risk model accounts for dual eligibility, and the measure objectively meets Battelle's risk adjustment criteria. In response to committee suggestions about exploring further adjustment for other settings, early model testing showed adjustment for geography would not have a substantial impact on ACO scores after accounting for clinical factors. - Members agreed with the appellant, noting that the measure developer adequately addressed risk adjustment concerns.

The Appeals Committee voted to uphold the appeal for CBE #4555, overturning the initial endorsement decision and defaulting the measure to “Endorsed with Conditions.”

Appeals Vote Count:

- Procedural Error: 8 (100%) Uphold the Appeal, and 0 (0%) Do not Uphold the Appeal.
- Misapplication of Criteria: 8 (100%) Uphold the Appeal, and 0 (0%) Do not Uphold the Appeal.

Additional Recommendations for the Developer/Steward: Recommendation Group members recommended the developer consider expanding the Medicare population beyond the ACO REACH Model, explore differences in scores for rural and urban settings, and explore adjusting on these geographic variables. The Recommendation Group also suggested the developer explore the impact of variation in attribution based on utilization (in the denominator).

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Appendix A: Cost and Efficiency Committee Roster

Fall 2024 Cycle

Member	Affiliation/ Organization	Primary Perspective	Advisory/ Recommendation Group
Seth Morrison (<i>Patient Representative Co-chair</i>)	--	Patient Partner	Recommendation Group
William Golden (<i>Non-patient Representative Co-chair</i>)	University of AR for Medical Sciences	Purchaser/Plan	Recommendation Group
Jacqueline Alikhaani	--	Patient Partner	Advisory Group
Nishant Anand	Altais	Clinician	Advisory Group
Sopida Andronaco	Hoag Orthopedic Institute	Clinician	Recommendation Group
Melody Beaty	MGA Homecare	Clinician	Advisory Group
Alice Bell	American Physical Therapy Association (APTA)	Clinician	Recommendation Group
Henish Bhansali	Duly Health and Care	Facility/Institution	Advisory Group
Bijan Borah	Mayo Clinic College of Medicine and Science	Researcher	Advisory Group
Lauren Campbell	NORC at the University of Chicago	Other Interested Party	Advisory Group
Amy Chin	HSS Center for the Advancement of Value in Musculoskeletal Care & Value Management Office at HSS	Researcher	Recommendation Group
Erin Crum	McKesson	Other Interested Party	Advisory Group
Sandeep Das	University of Texas Southwestern Medical Center	Health Equity Expert	Recommendation Group
Anne Deutsch	Northwestern University Feinberg School of Medicine	Researcher	Advisory Group
Marisa Elliott	Ascension	Facility/Institution	Recommendation Group
Lynn Ferguson	Patient and Family Advisory Council, Vanderbilt University	Patient Partner	Recommendation Group

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Member	Affiliation/ Organization	Primary Perspective	Advisory/ Recommendation Group
Maria Fernandez	Emory Healthcare	Health Equity Expert	Advisory Group
Stephanie Fitzgerald	Blue and Co LLC	Clinician	Advisory Group
Carrie I. Freeman-Wright	--	Patient Partner	Advisory Group
Joan Gleason Scott (inactive)	New Jersey Hospital Association	Other Interested Party	Recommendation Group
Beth Godsey	Vizient, Inc	Other Interested Party	Recommendation Group
Olga Gross-Balzano	BerryDunn	Facilities/Institutions	Advisory Group
Megan Guinn	BJC Healthcare ACO and BJC Medical Group	Facilities/Institutions	Recommendation Group
Daniel Halevy (inactive)	Healthfirst	Purchaser/Plan	Recommendation Group
Michelle Hammer	Elevance Health	Purchaser/Plan	Advisory Group
Stephanie Hansen	Toppenish Medical- Dental Clinic	Clinician	Advisory Group
Charles Hawley	National Association of Health Data Organizations	Other Interested Party	Advisory Group
Sharon Hibay	Advanced Health Outcomes LLC	Researcher in Health Services	Advisory Group
Kristal Higgins	--	Patient Partner	Advisory Group
Emma Hoo (inactive)	Purchaser Business Group on Health	Purchaser/Plan	Recommendation Group
Christina Hurst	--	Patient Partner	Advisory Group
Sunny Jhamnani	TriCity Cardiology	Clinician	Advisory Group
Robert Jones	Cleveland Clinic Independence Family Health Center	Clinician	Advisory Group
John Martin	Premier	Other Interested Party	Recommendation Group
Harold Miller	Center for Healthcare Quality and Payment Reform	Researcher	Recommendation Group
Jack Needleman	University of California, Los Angeles, Fielding School of Public Health	Researcher	Recommendation Group
Jessica Peterson	Anatomy IT	Other Interested Party	Advisory Group

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Member	Affiliation/ Organization	Primary Perspective	Advisory/ Recommendation Group
Rosa Plasencia	National Core Indicators, Aging and Disabilities (NCI-AD); ADvancing State	Health Equity	Recommendation Group
Pamela Roberts	Cedars-Sinai Medical Center & Physical Medicine and Rehabilitation, Cedars-Sinai Medical Center	Clinician	Recommendation Group
Susan Roberts	--	Patient Partner	Advisory Group
Shawn Ruder	--	Patient Partner	Advisory Group
Mary Schramke	--	Patient Partner	Recommendation Group
Lynden Schuyler	Illinois Public Health Association (IPHA)	Rural Health Expert	Advisory Group
Shalini Selvarajah	American College of Medical Genetics and Genomics	Researcher	Advisory Group
Trisha Jean Smith	--	Patient Partner	Advisory Group
Steven Spivack	The Lewin Group	Other Interested Party	Advisory Group
Kim Tyree	Evergreen Family Medicine	Rural Health Expert	Recommendation Group
Margaret Woeppel	--	Patient Partner	Recommendation Group

Measure Steward

Centers for Medicaid & Medicare Services

Measure Developer

Yale Center for Outcomes Research and Evaluation

