Partnership for Quality Measurement
Powered by Battelle

Fall 2022 Cycle

Cardiovascular Final Technical Report

October 2023

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Executive Summary

Cardiovascular disease (CVD) affects the lives of approximately 650,000 individuals in the United States every year. In addition to being the leading cause of mortality nationwide, CVD also has a significant impact on U.S. health care expenditures.[1] Quality measures that assess patient outcomes and the quality of care provided to patients living with CVD are critical to addressing the negative impact of CVD.

Quality measures are necessary tools for assessing improvements in CVD, as well as the extent to which health care stakeholders are using evidence-based strategies (e.g., prevention programs, health screenings, and community needs assessments) to advance the quality of care. To support this effort, Battelle endorses and maintains performance measures related to CVD through a standardized, consensus-based process.

For this project's measure review cycle, four measures were submitted for endorsement consideration (Table 1). The committee recommended two measures for endorsement but did not recommend the other two measures for endorsement. The Consensus Standards Approval Committee (CSAC) upheld the committee's endorsement recommendations.

Effective March 27, 2023, the National Quality Forum (NQF) is no longer the 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. Battelle has been selected to oversee the endorsement & maintenance (E&M) of clinical quality and cost/resource use measures. Since the Fall 2022 cycle launched at NQF, measures submitted for Fall 2022 E&M cycle continued along the prior E&M protocols that were in place at time of the Fall 2022 "Intent to Submit." In addition, the Scientific Methods Panel review and the committee's measure evaluation meeting for the Fall 2022 cycle were conducted under NQF. Battelle took over the E&M work beginning with the public comment period to close out the Fall 2022 cycle. This included launching the Fall 2022 post-comment period, convening the E&M committees for the post-comment meeting, convening the CSAC to render a final endorsement decision, and executing the Appeals period.

Table 1. Measures Submitted for Endorsement Consideration

Measure Number	Measure Title	New/ Maintenance	Developer/Steward	Final Endorsement Decision
2377	Overall Defect-Free Care for AMI	Maintenance	American College of Cardiology	Endorsed

Measure Number	Measure Title	New/ Maintenance	Developer/Steward	Final Endorsement Decision
2558	Hospital 30-Day, All-Cause, Risk Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	Maintenance	Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE)/Centers for Medicare & Medicaid Services	Endorsed
3716	CVD Risk Assessment Measure – Proportion of Pregnant/Postpartum Patients That Receive CVD Risk Assessment with a Standardized Tool	New	University of California, Irvine	Not Endorsed
3735	CVD Risk Follow-up Measure - Proportion of patients with a positive CVD risk assessment who receive follow-up care	New	University of California, Irvine	Not Endorsed

Summaries of the measure evaluation meetings are linked within the body of the report. Detailed summaries of the committee's discussion and ratings of the criteria for each measure are in Appendix A.

Introduction

CVD is a significant health challenge in the U.S., exerting a substantial impact on both public health and the economy. As the leading cause of mortality nationwide, CVD encompasses a spectrum of conditions such as acute myocardial infarction, coronary artery disease, and heart failure resulting in significant morbidity and mortality.[1] According to the Centers for Disease Control and Prevention (CDC), heart disease claims the lives of 650,000 Americans annually, and accounts for approximately one in every four deaths.[1]

The ramifications of CVD also have a profound impact on U.S expenditures. The American Heart Association (AHA) estimates that the direct and indirect costs of CVD and stroke exceed $350 billion per year in the U.S. These costs include expenses related to medication, health care services, lost productivity, and reduced quality of life.[2] Moreover, CVD disproportionately affects disadvantaged populations, which exacerbates health disparities across different socio-economic sectors.[3]

Quality measures are tools to measure or quantify health care processes, outcomes, patient perceptions, and organizational structures and/or systems that are associated with the ability to provide high-quality health. Furthermore, quality measures can be powerful tools in helping identify substantial performance gaps in cardiovascular care, affecting patient outcomes and overall cost.

Battelle, a CBE, convenes volunteer committees to evaluate and build consensus around quality measures for endorsement based on a standardized set of criteria. For the Fall 2022 cycle, the Cardiovascular standing committee reviewed measures focused on CVD risk within postpartum women, mortality following coronary artery bypass graft surgery, and defect-free care for an acute myocardial infarction.

Cardiovascular Measure Evaluation

For this measure review cycle, the Cardiovascular standing committee evaluated two new measures and two measures undergoing maintenance review using standard measure evaluation criteria.

Table 2. Number of Fall 2022 Cardiovascular Measures Submitted and Reviewed

	Maintenance	New	Total
Number of measures submitted for endorsement review	2	2	4
Number of measures withdrawn from consideration*	0	0	0
Number of measures reviewed by the committee	2	2	4
Number of measures endorsed	2	0	2
Number of measures not endorsed	0	2	2

**Measure developers/stewards can withdraw a measure from measure endorsement review at any point before the CSAC meeting.*

Scientific Methods Panel Measure Evaluation

Prior to the committee's review, the Scientific Methods Panel (SMP) reviewed one measure (CBE #2377) in this topic area for scientific acceptability (i.e., reliability and validity). The SMP passed the measure on both reliability and validity.

Comments Received Prior to Standing Committee Evaluation

For this evaluation cycle, pre-evaluation public commenting was conducted under NQF. For this evaluation cycle, two pre-evaluation comments were submitted for CBE #2558 and shared with the standing committee prior to the measure evaluation meeting on February 23, 2023. Both comments raised concern about the reliability and feasibility testing. A summary of comments for each measure reviewed is provided in Appendix A.

Comments Received Post Standing Committee Evaluation

Following the standing committee's measure evaluation meeting, the committee endorsement recommendations were posted on the PQM website for public comment. The commenting period opened on March 28, 2023, and closed on May 5, 2023. The committee received four comments pertaining to the measures under review and the committee endorsement recommendations. One comment was received for CBE #2558, which raised concern with the reliability and validity testing of the measure. The remaining three comments were received for CBE #3725 and for CBE #3716, expressing that the evidence used to support the measures was inadequate. Battelle convened the committee for the Fall 2022 post-comment web meeting

on June 16, 2023, to review and provide feedback on the full text of comments received. A summary of comments for each measure reviewed is provided in Appendix A.

Summary of Potential High-Priority Gaps

No potential high-priority measurement gaps emerged during the standing committee's evaluation.

Summary of Major Concerns or Methodological Issues

Lack of Evidence Demonstrating Improved Outcomes

During the standing committee's evaluation of the measures, two measures (CBE #3716 and CBE #3735) did not receive endorsement due to lack of strong empirical evidence that the measures lead to improved outcomes. The committee recognized the importance of assessing CVD risk in postpartum women. However, even though the developer of both measures cited evidence that the risk assessment was able to accurately identify pregnant or postpartum women at risk for CVD, an association between administering the risk assessment and outcomes was not established in the evidence. Additionally, evidence was not provided on whether follow-up visits lead to desired health outcomes. Details of the standing committee's discussion and ratings of the criteria for each measure are included in Appendix A.

References

1. Centers for Disease Control and Prevention. 2023). *Heart Disease Facts*. Retrieved 8/24/2023 from https://www.cdc.gov/heartdisease/facts.htm
2. American Heart Association. (2017). Cardiovascular Disease: A Costly Burden for America Projections Through 2035. https://recipes.heart.org/-/media/Files/About-Us/Policy-Research/Fact-Sheets/Public-Health-Advocacy-and-Research/CVD-A-Costly-Burden-for-America-Projections-Through-2035.pdf
3. Mensah, G. A., & Brown, D. W. (2007). An overview of cardiovascular disease burden in the United States. Health Aff (Millwood), 26(1), 38-48. https://doi.org/10.1377/hlthaff.26.1.38

Appendix A: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable

Under the NQF process, quorum is 66% of active standing committee members minus any recused standing committee members. Due to the exclusion of recused standing committee members from the quorum calculation, the required quorum for live voting may vary among measures. Quorum (16 out of 23 standing committee members) was reached and maintained throughout the full measure evaluation meeting on February 23, 2023. Vote totals may differ between measure criteria and between measures because standing committee members may have joined the meeting late, stepped away for a portion of the meeting, or had to leave the meeting before voting was complete. The vote totals listed below reflect the committee members present and eligible to vote at the time of the vote.

A measure is recommended for endorsement by the standing committee when greater than 60% of voting members select a passing vote option (i.e., Pass, High and Moderate, or Yes) on all must-pass criteria and overall suitability for endorsement. A measure is not recommended for endorsement when less than 40% of voting members select a passing vote option on any must-pass criterion or overall suitability for endorsement.

A.1 Measures Endorsed

CBE #2377 - Overall Defect Free Care for AMI

Staff Assessment | Specifications

Numerator Statement: Count of patients with ALL care opportunities met for which they were eligible

Denominator Statement: Count of patients with at least one eligible care opportunity

Exclusions: The exclusions for this measure were minimal and comprised: patients <18 years of age, hospital submissions that did not pass the NCDR quality check, and patients who were ineligible for defect free care measure (e.g., contraindications, clinical studies).

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Composite

Data Source: Registry Data

Measure Steward: American College of Cardiology

STANDING COMMITTEE EVALUATION

Table A.1-1.1 Importance to Measure and Report (MUST PASS)

Criterion	Total Votes	Rationale
1a. Evidence	• Total Votes-21; H-4; M-16; L-1; I-0 (20/21 – 95.2%, Pass)	• The standing committee reviewed the updated evidence provided for this maintenance measure and reviewed the 15 performance measures that comprise the *Overall Defect Free Care for AMI* composite, which have changed to align with the updated AHA/ACC Clinical Performance and Quality Measures for Adults With ST-Elevation Myocardial Infarction (STEMI) and Non–ST-Elevation Myocardial Infarction (NSTEMI). • A committee member noted that three new measures are in the composite. One measure is the time from the first medical contact to the balloon time in STEMI. • The committee considered evidence on first medical contact that may occur outside of the hospital setting and discussed considerations for rural areas. Following the discussion, the standing committee passed the measure on evidence.

Criterion	Total Votes	Rationale
1b. Performance Gap	• Total Votes-21; H-10; M-11; L-0; I-0 (21/21 – 100%, Pass)	• The committee considered the developer's use of Medicaid insurance status as an economic indicator of social risk and examination of race/ethnicity, age, and gender to determine if there were differences in these demographic indicators of social risk. • The developer also reported performance rates across various stratified populations. During the discussion on performance gap, the standing committee acknowledged that the median rate of performance for defect-free care across 764 hospitals was 72.32% using data from the National Cardiovascular Data Registry (NCDR) Chest Pain-MI Registry in 2019. Additionally, the developer reported the mean performance of the measure as 58.47%, with a standard deviation (SD) of 21.24. • The developer highlighted the "right-skewed" distribution of this measure, which shows that most hospitals were between 56 and 100%. There were also disparities by race and ethnicity, gender, age, and insurance status. • No additional discussion occurred, and the standing committee passed the measure on performance gap.
1c. Composite Rationale: Quality Construct and Rationale	• Total Votes-21; H-9; M-12; L-0; I-0 (21/21 – 100%, Pass)	• The developer emphasized the benefits of a composite measure to reduce the information burden by distilling the available indicators into a simple summary, tracking a wider range of metrics, and translating several variables into a single decision. • While the standing committee did acknowledge that all the individual component measures are concordant with the guidelines and that they, as a composite, reduce the measurement burden, some standing committee members also noted that there was no strong correlation between the composite measure and 30-day mortality for AMI. • The developer shared that measures in the composite would not influence 30-day mortality, such as referral to cardiac rehabilitation. They would likely have a longer-term effect outside of the 30 days, which has been seen in randomized trials. • Following this discussion, the standing committee voted to pass the measure on composite rationale.

Table A.1-1.2. Scientific Acceptability of Measure Properties (MUST PASS)

Criterion	Total Votes	Rationale
2a. Reliability	• Total Votes-19, Y-19, N-0 (19/19 – 100%, Pass)	• The committee reviewed the provided split sample testing (cohort split into two random samples) with calculation of Pearson correlation coefficient and Cronbach coefficient using a national registry for CY 2019 with 695 hospitals and 130,279 patients represented. • This measure was evaluated by the SMP and passed the measure on reliability. • The standing committee accepted the SMP's moderate rating for reliability.

Criterion	Total Votes	Rationale
2b. Validity	• Total Votes-20; Yes-20; No-0 (20/20 – 100%, Pass)	• The committee reviewed validity testing at the patient/encounter level including an audit using Chest Pain-MI (CPMI) registry data from 1/1/2019 to 12/31/2019. The committee also reviewed empirical validity testing of the composite measure score comparing hospital performance (n=526) on the composite measure of "defect-free care" (2019 data) and 30-day risk-standardized mortality rates for AMI (2013-2014 most recent data) and examined the distribution and correlation (Pearson correlation coefficient) of the two measures. • At the accountable entity level, reviewers noted the overall weak association and noted that this may be due to the measure being a composite of process measures or to the different time frames used. • During the discussion on validity, the standing committee reviewed the measure exclusions. A standing committee member highlighted that some patients may be in palliative care only and therefore should be excluded. The developer reported that 42.3% of hospital stays were ineligible for the measure. • The standing committee accepted the SMP's passing rating for validity.
2c. Composite Construction	• Total Votes-20; H-2; M-17; L-1; I-0 (19/20 – 95%, Pass)	• The developer assessed correlation between each of the 15 hospital-level component measures with the composite using the Pearson correlation coefficient. Components that were incorporated previously (prior NQF submissions) and identified as "topped out" were removed from the composite. • A committee member noted that this measure is based on older evidence and that clinicians do not prescribe beta-blockers at discharge for patients with normal LV function. • Following this discussion, the standing committee voted to pass the measure on composite quality construct.

Table A.1-1.3. Feasibility

Criterion	Total Votes	Rationale
3. Feasibility	• Total Votes-20; H-9; M-9; L-2; I-0 (18/20 – 90%, Pass)	• The measure data are generated or collected by and used by health care personnel during the provision of care, coded by someone other than a person obtaining original information, and/or abstracted from a record by someone other than a person obtaining original information. Additionally, the developer shared that there had been no difficulties reported regarding data collection, availability of data, missing data, and the frequency of data collection. • The committee acknowledged that the measure has been implemented successfully in many hospitals. In addition, all data elements are in defined fields in electronic clinical data and generated in the provision of health care. However, a committee member expressed concern about hospitals that do not have electronic health records (EHRs) being unable to participate in the measure because they would be unable to submit data to the NCDR Registry. The developer clarified that the NCDR did not require an interface with the EHRs. • The standing committee did not raise any additional concerns and passed the measure on feasibility.

Table A.1-1.4. Use and Usability (USE IS MUST PASS FOR MAINTENANCE MEASURES)

Criterion	Total Votes	Rationale
4a. Use	• Total Votes-21; Pass-21; No Pass-0 (21/21 – 100%, Pass)	• The committee reviewed current use in The Chest Pain – MI Registry™ Performance Achievement Award program, ACC's National Cardiovascular Data Registry (NCDR) Voluntary Hospital Public Reporting Program, CDR Chest Pain-MI Registry, the Centers for Medicare & Medicaid Services (CMS) Bundled Payments for Care Improvement (BPCI) Advanced program, and ACC Patient Navigator. • The standing committee acknowledged that this existing measure is publicly reported through multiple registries and in CMS-bundled payment programs. • The standing committee also noted that some positive changes had been made to this measure over time. • The committee did not have any concerns and passed the measure on use.
4b. Usability	• Total Votes-20; H-11; M-9; L-0; I-0 (20/20 – 100%, Pass)	• The committee reviewed the performance rates, which have increased over time from 66.8% in 2011 to 70.8% in 2017. Preliminary analysis showed that the benefits of the performance measure in facilitating progress toward achieving high quality, efficient healthcare for individuals or populations outweighs evidence of unintended negative consequences to individuals or populations. • The standing committee had no concerns and passed the measure on usability.

Table A.1-1.5. Related and Competing Measures

Criterion	Related and/or Competing Measure(s)	Rationale
5. Related and Competing	• CBE #0137 ACEI or ARB for left ventricular systolic dysfunction-Acute Myocardial Infarction (AMI) Patients • CBE #0142 Aspirin prescribed at discharge for AMI • CBE #0642 Cardiac Rehabilitation Patient Referral From an Inpatient Setting • CBE #3613e Cardiac Rehabilitation Patient Referral From an Inpatient Setting	• The committee did not have any questions or concerns with the related measures, CBE #0137, CBE #0142, and CBE #0642. • The standing committee reviewed a related measure: CBE #3613e *Appropriate Treatment for ST-Segment Elevation for Myocardial Infarction (STEMI) Patients in the Emergency Department (ED)*. • A committee member recommended increasing the number of minutes from the first medical contact to balloon to 120 minutes (from 90 minutes) to be harmonized with CBE #3613e, which uses 90 minutes but also uses the hospital arrival as time zero.

Table A.1-1.6. Standing Committee Recommendation for Endorsement

Committee Endorsement Recommendation	Total Votes	Rationale
Recommended for Endorsement	• Total Votes-20; Yes-20; No-0 (20/20 – 100%, Pass)	• Raising no further questions or concerns, the committee also passed the measure on overall suitability for endorsement.

Table A.1-1.7. Public and Member Comment

Supportive/Non-supportive Comments	Number of Comments Received	Comment Summary
Supportive comments	• None	• N/A
Non-supportive comments	• None	• N/A

CONSENSUS STANDARDS APPROVAL COMMITTEE (CSAC) EVALUATION

Table A.1-1.8. CSAC Endorsement Decision

CSAC Endorsement Decision	Total Votes	Rationale
Endorsed	• Total Votes-13; Yes-13; No-0 (13/13 – 100%, Endorsed)	• Unanimous approval to endorse the measure via a consent calendar.

APPEALS BOARD EVALUATION

Table A.1-1.9. Appeals

Appeal Received (Yes/No)	Appellant Organization	Summary of Appeal and Its Review
No	• N/A	• N/A

CBE #2558 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery

Staff Assessment | Specifications

Numerator Statement: The outcome for this measure is 30-day all-cause mortality. Mortality is defined as death for any reason within 30 days of the procedure date from the index admission for patients discharged from the hospital after undergoing isolated CABG surgery.

Denominator Statement: This claims-based measure can be used in either of two patient cohorts: (1) patients aged 65 years or older or (2) patients aged 18 years or older. We have tested the measure in both age groups.
The cohort includes admissions for patients who receive a qualifying isolated CABG procedure (see the attached Data Dictionary) and with a complete claims history for the 12 months prior to admission. The measure is publicly reported by CMS for those patients 65 years or older who are Medicare FFS beneficiaries admitted to non-federal hospitals.
For patients with more than one qualifying CABG surgery admission in the measurement period, the first CABG admission is selected for inclusion in the measure and the subsequent CABG admission(s) are excluded from the cohort.

Exclusions: The CABG surgery mortality measure excludes index admissions for patients:
1. With inconsistent or unknown vital status or other unreliable demographics (age and gender) data; or,
2. Discharged against medical advice (AMA).
For patients with more than one qualifying CABG surgery admission in the measurement period, the first CABG admission is selected for inclusion in the measure and the subsequent CABG admission(s) are excluded from the cohort.

Adjustment/Stratification: Statistical Risk Model

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome

Data Source: Other; Claims

Measure Steward: Yale CORE/CMS

STANDING COMMITTEE EVALUATION

Table A.1-2.1 Importance to Measure and Report (MUST PASS)

Criterion	Total Votes	Rationale
1a. Evidence	• Total Votes-19; Pass-19; No Pass-0 (19/19 – 100%, Pass)	• The standing committee reviewed new evidence submitted for this maintenance measure. Two additional studies were provided that examined the improvements in care that can reduce 30-day mortality rates following isolated CABG procedures. High-volume hospitals were found to have lower odds of mortality compared to low-volume hospitals. Also, a study examining 30-day mortality following cardiac surgical operations found that 98.4% of deaths within 30 days were attributable to the index operation. • The standing committee agreed that the evidence for the measure was strong. In addition, one or more clinical actions can be performed to impact the measure. • With no concerns raised, the standing committee passed the measure on evidence.

Criterion	Total Votes	Rationale
1b. Performance Gap	• Total Votes-20; H-3; M-17; L-0; I-0 (20/20 – 100%, Pass)	• The current submission compared the same three characteristics with updated data (July 2016 to June 2019). Hospitals were separated into quartiles based on the proportion of dual-eligible patients, low Agency for Healthcare Research and Quality (AHRQ) SES patients, and African American patients. Hospitals with the highest proportion of dual-eligible patients (8 or more) had an IQR of 0.6 (2.6 to 3.4) while the hospitals in the lowest quartile (2.6 or less) had an IQR of 0.7 (2.5 to 3.4). • There were also moderate differences between race and socioeconomic status. One standing committee member noted that it is reassuring that the measure indicates a decrease in disparities. Another committee member raised concern with the measure not being adjusted for disparities. • The committee passed the measure on performance gap.

Table A.1-2.2. Scientific Acceptability of Measure Properties (MUST PASS)

Criterion	Total Votes	Rationale
2a. Reliability	• Total Votes-19; H-0; M-18; L-1; I-0 (18/19 – 94.7%, Pass)	• The standing committee reviewed reliability testing at the accountable entity level. • The committee noted that the developer conducted signal-to-noise testing, demonstrating that the measure is reliable. The committee also noted lower reliability in lower-volume hospitals. In the lowest-volume hospitals, the reliability was 0.59, whereas in hospitals with more volume, the reliability was higher. The developer clarified that small hospitals do not participate in public reporting because the scores are not reliable at lower-case volumes. • The committee did not raise any additional concerns and passed the measure on reliability.

Criterion	Total Votes	Rationale
2b. Validity	• Total Votes-18; H-2; M-16; L-0; I-0 (18/18 – 100%, Pass)	• The committee noted that construct validity testing was conducted by comparing hospital performance on the RSMR to the Society of Thoracic Surgeons' (STS) CABG Composite Star Rating, the mortality group score of CMS's Overall Hospital Star Ratings, and the CABG procedural volume. The overall correlation between CMS's 30-day CABG measure scores and the STS Composite Star Rating was in the expected direction of -0.382. However, the statistical significance of this correlation was not provided. • The 30-day CABG RSMRs correlation with CMS's Hospital Star Rating mortality group scores was moderate and negatively correlated (-0.445, $p<0.0001$), as hypothesized by the developer. This relationship was maintained even after removing the CABG mortality measure from the Star Rating mortality group (-0.276, $p<0.0001$). The overall correlation of CABG volume and 30-day CABG RSMR was also in the expected range (-0.214, $p<0.05$). • The committee reviewed the risk modeling approach, which accounts for the within-hospital correlation of the observed outcome and accommodates the assumption that underlying differences in quality across hospitals lead to systematic differences in outcomes. It also accounts for clustering of observations within hospitals. • A committee member stated that the correlation between the measures is a weak form of validation, and it would be better to associate the measure between in-hospital process and outcome. • Following this discussion, the standing committee passed the measure on validity.

Table A.1-2.3. Feasibility

Criterion	Total Votes	Rationale
3. Feasibility	• Total Votes-18; H-11; M-7; L-0; I-0 (18/18 – 100%, Pass)	• There are no associated license fees, all data are in electronic fields, and all data are gathered in the regular provision of care. • Raising no major concerns, the committee passed the measure on feasibility.

Table A.1-2.4. Use and Usability (USE IS MUST PASS FOR MAINTENANCE MEASURES)

Criterion	Total Votes	Rationale
4a. Use	• Total Votes-17; Pass-17; No Pass-0 (17/17 – 100%, Pass)	• The committee reviewed current measure use in the Hospital Inpatient Quality Reporting Program, the Hospital Value-Based Purchasing Program, and the voluntary Bundled Payments for Care Improvement Advanced Program. • The standing committee did not have any concerns and passed the measure on use.
4b. Usability	• Total Votes-18; H-0; M-18; L-0; I-0 (18/18 – 100%, Pass)	• The committee reviewed performance of this measure, observing that it had improved over the last two measurement periods (2013-2016 vs. 2016-2019). A standing committee member raised concerns about low-volume hospitals not reporting. • Following the discussion, the committee voted to pass the measure on usability.

Table A.1-2.5. Related and Competing Measures

Criterion	Related and/or Competing Measure(s)	Rationale
5. Related and Competing	• CBE #0696 STS CABG Composite Score • CBE #1502 Risk-Adjusted Operative Mortality for Mitral Valve (MV) Repair + CABG Surgery • CBE #2514 Risk-Adjusted Coronary Artery Bypass Graft (CABG) Readmission Rate • CBE #2515 Hospital 30-day, all-cause, unplanned, risk-standardized readmission rate (RSRR) following coronary artery bypass graft (CABG) surgery • CBE #3494 Hospital 90-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	• The standing committee discussed measures CBE #0696, CBE #1502, and CBE #2515. A committee member commented that harmonization could be challenging if the risk models for the measures are fundamentally different. • The standing committee agreed that these measures are harmonized to the extent possible with CBE #2558.

Table A.1-2.6. Standing Committee Recommendation for Endorsement

Committee Endorsement Recommendation	Total Votes	Rationale
Recommended for Endorsement	• Total Votes-18; Yes-18; No-0 (18/18 – 100%, Pass)	• Raising no further questions or concerns, the standing committee passed the measure on overall suitability for endorsement.

Table A.1-2.7. Public and Member Comment

Supportive/Non-supportive Comments	Number of Comments Received	Comment Summary
Supporting	Two	Pre-evaluation comments: • Two public comments were received that raised concerns about the reliability testing and validity testing of this measure. Post-evaluation comments: • None
Non-supportive comments	One	Pre-evaluation comments • None Post-evaluation comments • The American Medical Association expressed concern about the minimum measure score reliability result, the lack of testing and adjustment for social risk factors, and the amount of variation demonstrating small differences in performance scores.

CONSENSUS STANDARDS APPROVAL COMMITTEE (CSAC) EVALUATION

Table A.1-1.8. CSAC Endorsement Decision

CSAC Endorsement Decision	Total Votes	Rationale
Endorsed	• Total Votes-13; Yes-13; No-0 (13/13 – 100%, Endorsed)	• Unanimous approval to endorse the measure via a consent calendar.

APPEALS BOARD EVALUATION

Table A.1-1.9. Appeals

Appeal Received (Yes/No)	Appellant Organization	Summary of Appeal and Its Review
No	• N/A	• N/A

A.2 Measures Not Endorsed

CBE #3716 CVD Risk Assessment Measure – Proportion of Pregnant/Postpartum Patients That Receive CVD Risk Assessment with a Standardized Tool

Staff Assessment | Specifications

Numerator Statement: The percentage of all pregnant and postpartum patients who received a CVD risk assessment with a standardized tool.

Denominator Statement: Pregnant and Postpartum Office visit assess the CVD risk of patients who are pregnant or postpartum (group B “Pregnant and Postpartum Office Visit” in the CPT-ICD 10 Code Book). Any person who is pregnant or postpartum who attends a pregnant or postpartum clinic visit at any participating site should undergo risk assessment. See the excel attachment “CPT – ICD 10 Code Book” for the full list of CVD confirmation CPT codes.

Exclusions: 1) Patients who have another reason for visiting the clinic and 2) Prior history of known cardiac disease

Adjustment/Stratification: Not risk adjusted or stratified

Level of Analysis: Clinician: Group/Practice

Setting of Care: Ambulatory Care, Inpatient/Hospital, Outpatient Services

Type of Measure: Process

Data Source: Electronic Health Records and Paper Medical Records

Measure Steward: University of California, Irvine

STANDING COMMITTEE EVALUATION

Table A.2-1.1. Importance to Measure and Report (MUST PASS)

Criterion	Total Votes	Rationale
1a. Evidence	• Total Votes-16; H-0; M-3; L-4; I-9 (3/16 – 18.7%, No Pass)	• The committee considered the logic model for the measure, which demonstrated the importance of risk assessment for pregnant or postpartum patients. The risk assessment assists providers in distinguishing between signs and symptoms of cardiac disease and those of normal pregnant and postpartum patients who may have CVD. • The California Maternal Quality Care Collaborative (CMQCC) Cardiovascular Disease in Pregnancy and Postpartum Task Force developed the risk assessment algorithm based on risk factors, symptoms, vital sign abnormalities, and physical examination findings commonly identified in patients who die of various types of CVD. • The committee recognized that there was no systematic review or grading conducted with respect to the evidence submitted. The literature submitted by the developer established that CVD is the leading cause of maternal mortality in the United States and in California. The developer further cited evidence that the risk assessment accurately identified pregnant or postpartum patients at risk for CVD. • However, the committee raised concern that an association between administering the risk assessment and outcomes was not established in the evidence submission. • As a result, the committee voted not to pass the measure on evidence—a must-past criterion.
1b. Performance Gap	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-1.2. Scientific Acceptability of Measure Properties (MUST PASS)

Criterion	Total Votes	Rationale
2a. Reliability	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.
2b. Validity	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-1.3. Feasibility

Criterion	Total Votes	Rationale
3. Feasibility	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-1.4. Use and Usability (USE IS MUST PASS FOR MAINTENANCE MEASURES)

Criterion	Total Votes	Rationale
4a. Use	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.
4b. Usability	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-1.5. Related and Competing Measures

Criterion	Related and/or Competing Measure(s)	Rationale
5. Related and Competing	CBE #0608 Pregnant women that had HBsAg testing	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.3-1.6. Standing Committee Recommendation for Endorsement

Committee Endorsement Recommendation	Total Votes	Rationale
Not Recommended for Endorsement	Vote Not Taken	• The standing committee did not vote on overall endorsement because the measure did not pass on evidence—a must-pass criterion.

Table A.2-1.7. Public and Member Comment

Supportive/Non-supportive Comments	Number of Comments Received	Comment Summary
Supportive comments	• None	N/A
Non-supportive comments	• Two	Pre-evaluation comments: • None Post-evaluation comments: • The American Medication Association agreed with the Standing Committee's concerns around the inadequacy of the evidence used to support the measure. • The American College of Obstetricians and Gynecologists encouraged reconsideration of the measure as soon as additional evidence is available.

CONSENSUS STANDARDS APPROVAL COMMITTEE (CSAC) EVALUATION

Table A.2-1.8. CSAC Endorsement Decision

CSAC Endorsement Decision	Total Votes	Rationale
Not Endorsed	• Total Votes-13; Accept-13; Do Not Accept-0 (13/13 – 100%, Not Endorsed)	• The CSAC had no major concerns and upheld the standing committee's decision to not endorse the measure.

APPEALS BOARD EVALUATION

Appeals:

- Based on the prior consensus-based entity's process, only endorsed measures are eligible for any appeal.

CBE #3735 CVD Risk Follow-Up Measure – Proportion of Patients with a Positive CVD Risk Assessment Who Receive Follow-Up Care

Staff Assessment | Specifications

Numerator Statement: Patients who were identified to be at risk for CVD and received follow-up care within 60 days of the risk.

Denominator Statement: Pregnant and postpartum patients who have been identified to be at risk for cardiovascular disease (CVD) during the measurement period. Patients who were screened for CVD and had a pregnancy loss or stillbirth will remain in the cohort.

Exclusions: Patients who discontinued care (no additional visit within 60 days after the risk assessment).

Adjustment/Stratification: Not risk adjusted or stratified

Level of Analysis: Clinician: Clinician: Group/Practice

Setting of Care: Ambulatory Care, Inpatient/Hospital, Outpatient Services

Type of Measure: Process

Data Source: Electronic Health Records and Paper Medical Records

Measure Steward: University of California, Irvine

STANDING COMMITTEE EVALUATION

Table A.2-2.1. Importance to Measure and Report (MUST PASS)

Criterion	Total Votes	Rationale
1a. Evidence	• Total Votes-18; H-0; M-1; L-2; I-15 (1/18 – 5.6%, No Pass) • Total Votes-18; Insufficient Evidence With Exception – 2; No exception – 16 (2/18 – 11.1%, No Pass)	• The committee noted that the evidence for this measure, and its subsequent concerns, were the same as with the previous measure, CBE #3716, which did not pass on evidence. As a result, the committee then voted not to pass this measure on evidence due to insufficient evidence. • However, since more than 60% of the committee voted insufficient, NQF guidance allowed the committee the opportunity to rate this measure as "insufficient evidence with exception" if there is an acceptable or beneficial rationale to hold providers accountable for performance in the absence of empirical evidence. • The committee subsequently voted on the evidence exception but did not vote to grant an exception to the evidence. Therefore, the measure did not pass on evidence—a must-pass criterion.
1b. Performance Gap	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-2.2. Scientific Acceptability of Measure Properties (MUST PASS)

Criterion	Total Votes	Rationale
2a. Reliability	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.
2b. Validity	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-2.3. Feasibility

Criterion	Total Votes	Rationale
3. Feasibility	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-2.4. Use and Usability (USE IS MUST PASS FOR MAINTENANCE MEASURES)

Criterion	Total Votes	Rationale
4a. Use	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.
4b. Usability	Vote Not Taken	• The standing committee did not pass the measure on evidence—a must-pass criterion; therefore, the standing committee did not discuss or vote on any subsequent criteria.

Table A.2-2.5. Related and Competing Measures

Criterion	Related and/or Competing Measure(s)	Rationale
5. Related and Competing	• CBE #0607 Pregnant women that had syphilis screening • CBE #1927 Cardiovascular Health Screening for People With Schizophrenia or Bipolar Disorder Who Are Prescribed Antipsychotic Medications	• Measure was not recommended for endorsement; therefore, the related measures were not discussed.

Table A.2-2.6. Standing Committee Recommendation for Endorsement

Committee Endorsement Recommendation	Total Votes	Rationale
Not Recommended for Endorsement	Vote Not Taken	• The standing committee did not vote on overall endorsement because the measure did not pass on evidence—a must-pass criterion.

Table A.2-2.7. Public and Member Comment

Supportive/Non-supportive Comments	Number of Comments Received	Comment Summary
Supportive comments	• None	• N/A
Non-supportive comments	• One	Pre-evaluation comments: • None Post-evaluation comment: • The American Medical Association agreed with the standing committee's concerns around the inadequacy of the evidence used to support the measure.

CONSENSUS STANDARDS APPROVAL COMMITTEE (CSAC) EVALUATION

Table A.2-2.8. CSAC Endorsement Decision

CSAC Endorsement Decision	Total Votes	Rationale
Not Endorsed	• Total Votes-13; Accept-13; Do Not Accept-0 (13/13 – 100%, Not Endorsed)	• The CSAC had no major concerns and upheld the standing committee's decision to not endorse the measure.

APPEALS BOARD EVALUATION

Appeals:

- Based on the prior consensus-based entity's process, only endorsed measures are eligible for any appeal.

Appendix B: Cardiovascular Standing Committee and Battelle Staff

CARDIOVASCULAR STANDING COMMITTEE

Tim Dewhurst, MD, FACC (Co-Chair)
Interventional Cardiologist
Medical Director for Clinical Value Improvement, Kaiser Permanente

Thomas Kottke, MD, MSPH (Co-Chair)
Medical Director for Population Health, Consulting Cardiologist, HealthPartners

Michael Alexander, MD, MPH, FACC
Senior Medical Director, CIGNA Healthcare

Jacqueline Hawkins Alikhaani
Patient Advisor

David Boston, MD, MS
Medical Director Virtual Care, OCHIN

Linda Briggs, DNP
Assistant Professor, George Washington University, School of Nursing

Leslie Cho, MD
Section Head, Preventive Cardiology and Rehabilitation, Cleveland Clinic

Abdulla A. Damluji, MD, MPH, PhD
Interventional Cardiologist, Inova Center of Outcome Research

Kumar Dharmarajan, MD, MBA (*Inactive*)
Chief Scientific Officer, Clover Health

William Downey, MD
Vice Chair, Quality and Care Transformation,
Medical Director, Interventional Cardiology
Sanger Heart and Vascular Institute, Atrium Healthcare

Howard Eisen, MD (*Inactive*)
Medical Director of the Cardiac Transplant
Mechanical Circulatory Support and Advanced Heart Failure Programs

Naftali Zvi Frankel, MS
Principal, Déclore Consulting

Jake Galdo, PharmD, MBA, BCPS, BCGP (*Inactive*)
Director, Education and Program Development
Pharmacy Quality Alliance

Lori Hull-Grommesh, DNP, RN, APRN-BC, ACNP-BC, NEA-BC, FAANP
Assistant Professor, University of Texas Health Science Center at Houston

Tiffany Johnson
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Professor of Economics, University of Southern California

Ashley Tait-Dinger, MBA
Director of Analytics, Alternative Payment Models (APM) & Finance
Florida Alliance for Healthcare Value

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Department of Family Medicine, Michigan State University

Daniel Waxman, MD
Health Policy Researcher at RAND
Associate Professor, Emergency Medicine at University of California Los Angeles (UCLA)

Jeffrey Wexler
Sr. Project Manager, Quest Diagnostics

Wen-Chih Hank Wu, MD, MPH
Chief of Cardiology, Veterans Affairs

PERINATAL AND WOMEN'S HEALTH STANDING COMMITTEE

Kimberly Gregory, MD, MPH (Co-Chair)
Vice Chair, Women's Healthcare Quality & Performance Improvement;
Helping Hand of Los Angeles – The Miriam Jacobs Chair in Maternal-Fetal Medicine
Department of Obstetrics and Gynecology, Cedars Sinai Medical Center

Christina Davidson, MD
Vice Chair of Quality, Patient Safety & Equity, Baylor College of Medicine
Chief Quality Officer for Obstetrics & Gynecology, Texas Children's Hospital

Sue Kendig JD, WHNP-BC, FAANP
Director of Policy, National Association of Nurse Practitioners in Women's Health

SURGERY STANDING COMMITTEE

Vilma Joseph, MD, MPH, FASA (Co-Chair)
Professor of Anesthesiology, Albert Einstein College of Medicine/Montefiore Medical Center

Alex Sox-Harris, PhD, MS (Co-Chair)
Associate Professor, Department of Surgery, Stanford University

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Social Scientist II

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