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Cardiovascular, Fall 2019 Cycle: CDP Report

DRAFT REPORT FOR COMMENT
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Contents

Executive Summary

Cardiovascular disease (CVD) is a significant burden in the United States, leading to approximately one in four deaths per year.[1] Considering the effect of CVD, measures that assess clinical care performance and patient outcomes are critical to reducing the negative impacts of CVD.

For this project, the Cardiovascular Standing Committee evaluated one newly submitted measure and six measures undergoing maintenance review against NQF's standard evaluation criteria. The Committee recommended four measures for endorsement, and the Committee did not recommend three measures. The recommended measures are:

- **NQF 0018** Controlling High Blood Pressure
- **NQF 0071** Persistence of Beta-Blocker Treatment After a Heart Attack
- **NQF 0965** Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients
- **NQF 3534** 30-Day All-Cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR)

The Committee did not recommend the following measures:

- **NQF 0670** Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients
- **NQF 0671** Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI)
- **NQF 0672** Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients

Brief summaries of the measures currently under review are included in 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

The measures in the Cardiovascular portfolio have been grouped into various conditions, diseases, or procedures related to cardiovascular health. These topic areas include primary prevention and screening, coronary artery disease (CAD), ischemic vascular disease (IVD), acute myocardial infarction (AMI), cardiac catheterization, percutaneous catheterization intervention (PCI), heart failure (HF), rhythm disorders, implantable cardioverter-defibrillators (ICDs), cardiac imaging, cardiac rehabilitation, and high blood pressure.

NQF Portfolio of Performance Measures for Cardiovascular Conditions

The Cardiovascular Standing Committee (Appendix C) oversees NQF's portfolio of cardiovascular measures (Appendix B) that includes measures for acute myocardial infarction (AMI), cardiac catheterization/percutaneous coronary intervention (PCI), coronary artery disease (CAD)/ischemic vascular disease (IVD), cardiac imaging, heart failure, hyperlipidemia, hypertension, implantable cardiovascular devices (ICDs), rhythm disorders, and survival after cardiac arrest. This portfolio contains 43 endorsed measures: 19 process, 19 outcome and resource use measures, and five composite measures (see Table 1).

Table 1. NQF Cardiovascular Portfolio of Measures

	Process	Outcome/Resource Use	Composite
Acute myocardial infarction (AMI)	5	3	1
Cardiac catheterization/percutaneous coronary intervention (PCI)	0	7	1
Coronary artery disease (CAD)/ischemic vascular disease (IVD)	6	1	1
Cardiac imaging	0	3	0
Heart failure	5	2	0
Hyperlipidemia	1	0	0
Hypertension	0	1	0
Implantable cardiovascular devices (ICDs)	1	0	2
Rhythm disorders	1	1	0
Survival after cardiac arrest	0	1	0
Total	19	19	5

The remaining measures have been assigned to other portfolios. These include readmission measures for AMI and HF (All-Cause Admissions/Readmissions Committee), measures for coronary artery bypass

graft (CABG) (Surgery Committee), and primary prevention measures (Prevention and Population Health Committee).

Cardiovascular Measure Evaluation

On February 6, 2020, the Cardiovascular Standing Committee evaluated one new measure and six measures undergoing maintenance review against NQF's standard measure evaluation criteria.

Table 2. Cardiovascular Measure Evaluation Summary

	Maintenance	New	Total
Measures under consideration	6	1	7
Measures recommended for endorsement	3	1	4
Measures not recommended for endorsement	3	0	3
Reasons for not recommending	Importance – 3 Scientific Acceptability – 0 Use – 0 Overall Suitability – 0 Competing Measure – 0	Importance – 0 Scientific Acceptability – 0 Overall Suitability – 0 Competing Measure – 0	

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments for a continuous 16-week period during each evaluation cycle via an online tool located on the project webpage. For this evaluation cycle, the commenting period opened on December 5, 2019 and will close on May 24, 2020. As of January 28, 2020, no comments were submitted.

Overarching Issues

During the Standing Committee's discussion of the measures, an overarching issue emerged that factored into the Committee's ratings and recommendations for multiple measures and is not repeated in detail with each individual measure.

Review of Appropriate Use Measures

The Committee reviewed three appropriate use measures in this cycle. The Committee noted a disconnect between the focus of the NQF measure evaluation criteria and appropriate use measures. For these measures, the underlying literature cited as support contained multiple expert opinion statements, but extremely limited empirical data. Under NQF's current measure evaluation criteria, expert opinion is not considered evidence. When faced with a measure supported solely by expert opinion, committees can pass the measure on evidence by using the "Insufficient Evidence with

Exception" rating. The Committee urged NQF to consider an alternative evidence algorithm for appropriate use measures, as it is extremely rare to have empirical data for appropriate use measures. The Committee was concerned that measures with good intent and very strong face validity will not be able to meet the criteria, and as a result, may not be widely implemented. There was general agreement that an examination of the endorsement criteria and process is needed with a goal of identifying and addressing any unintended barriers for endorsement of appropriate use measures.

Summary of Measure Evaluation

The following brief summaries of the measure evaluation highlight the major issues that the Committee considered. Details of the Committee's discussion and ratings of the criteria for each measure are included in Appendix A.

0018 Controlling High Blood Pressure (National Committee for Quality Assurance): Recommended

Description: The percentage of adults 18-85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure was adequately controlled (<140/90 mm Hg) during the measurement year; **Measure Type**: Outcome: Intermediate Clinical Outcome; **Level of Analysis**: Health Plan; **Setting of Care**: Outpatient Services; **Data Source**: Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records

The Standing Committee recommended the measure for endorsement. The Standing Committee voted to pass this measure on evidence and performance gap. The Committee discussed challenges with setting appropriate blood pressure goals and the nuances of blood pressure measurement. The Committee mentioned that treatment to a single set target for both diastolic and systolic blood pressure can be difficult and may not be appropriate at the individual patient level. The Committee and the developer discussed measuring based on a point measure versus an average of readings and the data challenges related to obtaining an average reading. The Committee was pleased to see the inclusion of some forms of remote monitoring in the updated specifications, but noted only monitors that auto-transmit data are currently included. The Committee discussed the simplicity of having one blood pressure measure versus having multiple measures split by age. They noted that, as age increases, the absolute risk reduction gained through treatment also increases; however, the potential for adverse events also rises with age. A Committee member noted that age does not correspond perfectly with physiological state. Ultimately, the Committee decided this measure is appropriate for use at a population level for health plans, noting that the measure performance goal is not 100%. The Committee accepted the NQF Scientific Methods Panel's moderate rating on reliability unanimously but chose to vote on the validity criterion. The Committee did not express any concerns about the feasibility of the measure. They agreed that the benefits outweighed the harms and the measure passed on use and usability.

0071 Persistence of Beta-Blocker Treatment After a Heart Attack (National Committee for Quality Assurance): Recommended

Description: The percentage of patients 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of

the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge; **Measure Type**: Outcome: Intermediate Clinical Outcome; **Level of Analysis**: Health Plan; **Setting of Care**: Outpatient Services; **Data Source**: Claims

The Standing Committee recommended the measure for endorsement. The Standing Committee noted that the definition and treatment of myocardial infarction has changed since the measure was initially developed and endorsed. More sensitive troponin tests for diagnosis and treatment by early reperfusion could affect the patient population included in this measure. The Committee discussed the performance and disparities data provided by the developer. The Committee agreed that the performance data provided shows a clear gap in performance, and concluded there is an opportunity for improvement that warrants a national performance measure. The Committee discussed the reliability and validity of the measure. The Committee noted that the testing data included Healthcare Effectiveness Data and Information Set (HEDIS) 2018 plan data, including commercial, Medicaid, and Medicare plans. Noting that the score-level reliability was conducted using a beta-binomial model, the Committee unanimously accepted the NQF Scientific Methods Panel's moderate rating for reliability. Committee members mentioned that the construct validity data made sense; however, concerns were raised regarding face validity since the measure's title indicates that it is a medication persistence measure, while the specifications are consistent with a medication adherence measure. The Committee chose to vote on the validity criterion and concluded that the measure met the validity criterion. The Committee did not express any concerns about the feasibility of the measure. They agreed that the benefits outweighed the harms and the measure passed on use and usability measure criterion.

0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients (American College of Cardiology Foundation): Not Recommended

Description: Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation; **Measure Type**: Efficiency; **Level of Analysis**: Facility, Clinician: Group/Practice; **Setting of Care**: Outpatient Services; **Data Source**: Other, Registry Data

The Standing Committee did not vote on the recommendation for endorsement because the measure did not pass the performance gap criterion—a must-pass criterion.

The Committee agreed the evidence was moderate, as a strong clinical rationale was provided, but the random control trial data reported was not directly related to the low-risk population included in the measure. When discussing performance gap, the Committee noted that the developer did not provide updated performance gap data, and that the previous data may not correspond to the measure as specified. The Committee determined the information provided was insufficient to evaluate the current performance gap.

0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI) (American College of Cardiology Foundation): Not Recommended

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed routinely after PCI, with reference to timing of test after PCI and symptom status; **Measure Type**: Efficiency; **Level of Analysis**: Facility, Clinician: Group/Practice; **Setting of Care**: Outpatient Services; **Data Source**: Other, Registry Data

The Standing Committee did not vote on the recommendation for endorsement because the measure did not pass the performance gap criterion—a must-pass criterion.

The Committee noted that the evidence provided for this measure was based on expert consensus instead of empirical data. They further discussed how it is difficult to know who is accountable for the performance of this measure, as the individual ordering a stress test may not be the person performing the PCI. Given the consensus of expert opinion suggesting the importance of this measure, the Committee voted this measure as having insufficient evidence, with exception.

Following the vote, the Committee discussed the performance gap of this measure. The Committee noted that the developer did not provide updated performance gap data, and that the previous data may not correspond to the measure as specified. The Committee determined the information provided was insufficient to evaluate the current performance gap.

0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients (American College of Cardiology Foundation): Not Recommended

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed in asymptomatic, low coronary heart disease (CHD) risk patients for initial detection and risk assessment; **Measure Type**: Efficiency; **Level of Analysis**: Facility, Clinician: Group/Practice; **Setting of Care**: Outpatient Services; **Data Source**: Other, Registry Data

The Standing Committee did not vote on the recommendation for endorsement because the measure did not pass the performance gap criterion—a must-pass criterion.

The Committee discussed that no empirical evidence is provided for this measure since this patient population is rarely the focus of trials, and testing is rare in this population. The Committee further noted that the submitted evidence is based on a consensus document. The developer stated they will likely have more data now that the educational and operations testing period of the appropriate use criteria program created under the Protecting Access to Medicare Act (PAMA) of 2014, Section 218(b) has gone into effect. The Committee agreed that the evidence for this measure is insufficient; however, given existing systematic assessments, multiple international guidelines, and expert opinions suggesting the benefits of this measure outweigh the harms, the Committee voted that an exception should be made.

Following the vote on evidence, the Committee evaluated this measure against the performance gap criterion. The Committee noted that the developer did not provide updated performance gap data, and that the previous data may not correspond to the measure as specified. The Committee determined the information provided was insufficient to evaluate the current performance gap. While the Committee agreed with the intent of this measure to ensure patients are not inappropriately tested, this measure did not pass the performance gap criterion.

0965 Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients (American College of Cardiology): Recommended

Description: Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge; **Measure Type**: Composite; **Level of Analysis**: Facility; **Setting of Care**: Inpatient/Hospital; **Data Source**: Registry Data

The Standing Committee recommended the measure for endorsement. The Committee explored the relationship between the patient populations in the evidence presented and the patient population included in the measure. Although there was not a direct match, the measured population represents a subset of the larger patient population covered by the evidence. The Committee also raised questions about specific medications. Angiotensin receptor-neprilysin inhibitors (ARNIs) are a new drug class used to treat heart failure, and the Committee inquired if ARNIs are included in this measure. The developer clarified that ARNIs are included in the measure specifications, but not in the measure title. The Committee also inquired about hydralazine, which is a preferred medication for African American patients with heart failure. The developer stated they do not receive race/ethnicity data for calculation, but would instead handle this by having sites indicate African American patients have contraindications to the medications in the measure. This would remove them from the measure denominator. The Committee was satisfied that providers would not be penalized for appropriately prescribing hydralazine. The Committee was satisfied that testing results demonstrated adequate reliability and validity. The Committee did not express any concerns about the feasibility, use, and usability of the measure. They noted that the measure is not used in an accountability program, but is publicly reported in the National Cardiovascular Data Registry (NCDR).

3534 30-Day All-Cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR). (American College of Cardiology): Recommended

Description: This measure estimates hospital risk standardized odds ratio for death from all causes within 30 days following transcatheter aortic valve replacement. The measure uses clinical data available in the STS/ACC TVT Registry for risk adjustment. For the purpose of development and testing, the measure used site-reported 30-day follow-up data contained in the STS/ACC TVT Registry; **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Inpatient/Hospital; **Data Source**: Registry Data

The Standing Committee recommended the measure for endorsement. Across the criteria, the Standing Committee discussion focused mainly on missing data and its potential impact on the measure. Facilities that participate in the registry are excluded from risk-adjusted measure results if certain elements are

less than 90% complete. The Committee was particularly concerned with whether the missing data affected the measure's validity and if the missing data were due to a feasibility issue. The data elements of concern were the Kansas City Cardiomyopathy Questionnaire (KCCQ) and the six-minute walk test, both of which are used to assess patient functional status, and both of which are included in the risk adjustment model. The developer noted that they are seeing an increase in data capture for these elements, which are important measures of functional status, and that continuing to include the elements in the measure will encourage continued improvement in the use and recording of the data elements. The developer stated that care for patients who are candidates for a TAVR procedure should include functional status assessment. The Committee ultimately agreed that the measure was suitable for endorsement, but encouraged the developer to continue to monitor the completeness of data submissions and the usefulness of the data for measure calculation and risk adjustment. The Committee accepted the NQF Scientific Methods Panel's moderate rating on reliability unanimously; however, they determined their discussion warranted a Committee vote on validity, and ultimately, the Committee was satisfied that the measure met the criteria. The Committee did not express any concerns about the feasibility of the measure. They noted that this measure is not currently in use, but that the developer provided a credible plan for implementation and use.

Measures Withdrawn from Consideration

One measure previously endorsed by NQF has not been resubmitted for maintenance of endorsement. Endorsement for these measures will be removed.

Table 3. Measures Withdrawn from Consideration

Measure	Reason for withdrawal
NQF 2396 Carotid Artery Stenting: Evaluation of Vital Status and NIH Stroke Scale at Follow Up	Developer is not seeking re-endorsement.

References

1 Heron M. Deaths: Leading Causes for 2014. *Natl Vital Stat Rep*. 2016;65(5):1-96.

Appendix A: Details of Measure Evaluation

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

Measures Recommended

0018 Controlling High Blood Pressure

Submission | Specifications

Description: The percentage of adults 18-85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure was adequately controlled (<140/90 mm Hg) during the measurement year.

Numerator Statement: Patients whose most recent blood pressure level was <140/90 mm Hg during the measurement year.

Denominator Statement: Patients 18-85 years of age who had at least two visits on different dates of service with a diagnosis of hypertension during the measurement year or the year prior to the measurement year.

Exclusions: This measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

Additionally, this measure excludes patients with evidence of end-stage renal disease, dialysis, nephrectomy, or kidney transplant on or prior to the December 31 of the measurement year. It also excludes female patients with a diagnosis of pregnancy during the measurement year, and patients who had a nonacute inpatient admission during the measurement year.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan

Setting of Care: Outpatient Services

Type of Measure: Outcome: Intermediate Clinical Outcome

Data Source: Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **H-2; M-13; L-1; I-0**; 1b. Performance Gap: **H-11; M-5; L-0; I-0**

Rationale:

- The developer provided a diagram outlining the steps between the process and the intermediate outcome (adequate control of blood pressure), and how the intermediate outcome in turn influences the longer-term outcomes (reduction in cardiovascular events).
- The evidence base for this measure includes two graded clinical practice guidelines: one from the American College of Cardiology (ACC)/American Heart Association (AHA), and one from the American College of Physicians (ACP) and the American Academy of Family Physicians (AAFP). The guidelines differ in age of target population and recommend different blood pressure goals.
- The Committee discussed challenges with setting appropriate blood pressure goals, the nuances of blood pressure measurement, and how implementation of blood pressure management and control and clinical evidence recommendations interrelate.
- The Committee mentioned that treatment to a single set target for both diastolic and systolic blood pressure can be difficult and may not be appropriate at the individual patient level. The Committee noted that this measure is intended for use at a population level and not at the patient level.
- The Committee discussed the simplicity of having one blood pressure measure versus having multiple measures split by age, taking note of the differences in the guidelines. They noted that as age increases, the absolute risk reduction gained through treatment also increases; however, the potential

for adverse events also rises with age. A Committee member noted that age does not correspond perfectly with physiological state.
- Ultimately, the Committee decided the evidence supported the use of this measure for the level of analysis specified.
- The developer provided HEDIS measure results from recent years, sharing the following results for 2018:
    - For commercial plans: mean of 55%, range of 0-85%
    - For Medicare plans: mean of 69%, range of 0-100%
    - For Medicaid plans: mean of 59%, range of 0-85%
- The developer stated they do not currently collect performance data stratified by race, ethnicity, or language, and summarized literature demonstrating variation in the prevalence of hypertension by race and that there are disparities in awareness, treatment, and control of hypertension.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Accepted Scientific Methods Panel (SMP) Rating (Moderate)**; 2b. Validity**: H-0; M-13; L-3; I-0**

<u>Rationale</u>:

- This measure was deemed complex and evaluated by the SMP.
- Reliability of the health plan measure score was tested using a beta-binomial approach (i.e., signal to noise); overall reliability ranged 0.982-0.999 across the three types of plans.
- The NQF SMP's ratings for reliability: H-4; M-1; L-0; I-2.
- The Committee had no concerns around reliability and voted unanimously to accept the SMP's rating.
- The SMP initially had concerns about the comparison measures the developers chose to demonstrate construct validity. The developer provided updated construct validity testing.
- The developer hypothesized that health plans that perform well managing one chronic condition (hypertension) should perform well managing other chronic conditions. They repeated the construct validity analysis using two a1C control measures: NQF #0575 Comprehensive Diabetes Care: HbA1c Control (< 8%) and NQF #0059 Comprehensive Diabetes Care: HbA1c Poor Control (>9%).
    - Pearson correlation with #0575 across the three types of health plans ranged from 0.51 to 0.81; Medicare had the lowest, and commercial had the highest correlation score.
    - Pearson correlation with #0059 across the three types of health plans ranged from -0.58 to -0.82; Medicare had the lowest correlation score, and commercial and Medicaid had very similar.
- The Committee discussed the lack of race and ethnicity data and the impact this might have on risk and control.
- The developer stated they would like to be able to do this analysis; however, they are not receiving any race and ethnicity data from health plans.
- The Committee decided to vote on validity rather than accept the SMP rating.

3. Feasibility: **H-9; M-7; L-0; I-0**

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified; 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The Committee had no concerns on this criterion. The measure uses readily available data elements that are generated during care delivery.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Pass-16; No Pass-0** 4b. Usability*:* **H-3; M-12; L-1; I-0**

<u>Rationale</u>:

- The Committee had no concerns on these criteria. The measure is used in numerous accountability applications and is publicly reported. The developer reports that performance has been generally improving over the last several years by approximately 1 percent each year.

5. Related and Competing Measures

- This measure is related to:
  - 0061 Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)
  - 2602 Controlling High Blood Pressure for People with Serious Mental Illness
  - 2606 Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)
  - 0729 Optimal Diabetes Care (Minnesota Community Measurement)
  - 0076 Optimal Vascular Care (Minnesota Community Measurement)
- The Committee noted that 2602 has blood pressure targets that conflict with 0018. The developer stated they are working on updating 2602 to align with 0018 and that this conflict will be resolved.

6. Standing Committee Recommendation for Endorsement: **Y-16**; **N-0**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

9. Appeals

0071 Persistence of Beta-Blocker Treatment After a Heart Attack

Submission | Specifications

Description: The percentage of patients 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.

Numerator Statement: Patients who received at least 135 days of treatment with beta-blockers during the 180-day measurement interval.

Denominator Statement: An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.

Exclusions: Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria:

- Asthma
- COPD
- Obstructive chronic bronchitis
- Chronic respiratory conditions due to fumes and vapors
- Hypotension, heart block >1 degree or sinus bradycardia
- A medication dispensing event indicative of a history of asthma
- Intolerance or allergy to beta-blocker therapy

Additionally, this measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

Adjustment/Stratification: No risk adjustment or risk stratification **Level of Analysis:** Health Plan

Setting of Care: Outpatient Services

Type of Measure: Outcome: Intermediate Clinical Outcome

Data Source: Claims

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **H-2; M-10; L-4; I-0**; 1b. Performance Gap: **H-2; M-11; L-3; I-0**

<u>Rationale</u>:

- The developer stated that the evidence has not changed since the previous review of this measure and the Committee mostly concurred.
- The developer provided decision logic from secondary prevention to intermediate clinical outcome for the persistent use of beta-blockers in reducing the risk of mortality, risk and severity of re-infarction, and improving the preservation of the left ventricular function with patients with AMI.
- The developer provides two clinical practice guidelines with four statements supporting the persistent use of beta-blockers in patients diagnosed with AMI.
- The Committee noted that there is some new evidence since the last review, and that it is consistent with the evidence presented.
- The Committee mentioned that the definition and treatment of myocardial infarction has changed since the measure was initially developed and endorsed. More sensitive troponin tests for diagnosis and treatment by early reperfusion could affect the patient population included in this measure.
- The developer provided measure results from recent years, sharing the following results for 2017:
    - For commercial plans: mean of 85%, range of 57-100%
    - For Medicare plans: mean of 90%, range of 71-100%
    - For Medicaid plans: mean of 78%, range of 39-97%
- The developer stated they do not currently collect performance data stratified by race, ethnicity, or language, and summarized literature on the prevalence of heart disease, medication adherence among MI survivors by disability, status, race/ethnicity, and income for all Medicare FFS beneficiaries and the impact of employment status on rates of CHD/stroke. The summary demonstrates disparities in premature death due to heart disease or stroke and in rates of recurrent MI or fatal CHD.
- The Committee felt that the data presented demonstrated a clear gap in performance.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Accepted Scientific Methods Panel (SMP) Rating (Moderate)**; 2b. Validity: **H-0; M-12; L-3; I-1**

<u>Rationale</u>:

- This measure was deemed complex and was evaluated by the SMP.
- The developer conducted score-level reliability testing using the beta-binomial model described by Adams (2009).
    - Average reliability, commercial: 0.757; 25th percentile=0.521, median=0.672
    - Average reliability, Medicaid: 0.818; 25th percentile=0.389, median=0.621
    - Average reliability, Medicare: 0.730; 25th percentile=0.670, median=0.772
- The NQF SMP's ratings for reliability: H-2; M-5; L-0; I-0
- The Committee had no concerns regarding the reliability of the measure and voted unanimously to accept the SMP rating.
- The developer conducted score-level construct validation by correlating the scores for this measure to those of a measure of statin therapy adherence. The developer hypothesized that a plan that does well on the statin adherence measure for cardiovascular disease would also do well on this measure.
    - Pearson correlation coefficient, commercial: 0.51 (statistically significant)
    - Pearson correlation coefficient, Medicaid: 0.60 (statistically significant)

- Pearson correlation coefficient, Medicare: 0.42 (statistically significant)
- The Committee discussed face validity and questioned whether the terminology used in the measure could cause confusion about what the measure evaluates.
- The Committee noted that the measure uses a proportion of days-covered (PDC) methodology, which is indicative of a medication adherence measure. The measure is titled as a persistence measure that implies no gaps in medication.
- The Committee also discussed the methodology to calculate the PDC for the measure and whether it aligned with methodologies in use in other measures.
- The Committee opted to vote on validity.

3. Feasibility: H-6; M-10; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified; 3d. Data collection strategy can be implemented)

Rationale:

- The Committee had no concerns regarding the feasibility of the measure. The measure uses readily available data elements that are generated during care delivery.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Pass-15; No Pass-2** 4b. Usability*:* **H-0; M-13; L-4; I-0**

Rationale:

- This measure is publicly reported in NCQA's State of Health Care annual report and Quality Compass. It is also used to calculate health plan rankings reported in Consumer Reports. This measure is also used in scoring for accreditation of Medicare Advantage Health Plans.
- The Committee had no concerns about the use of the measure.
- The developer states over the past three years:
  - Commercial plan performance has increased annually by 1%
  - Medicare plan performance has remained relatively stable
  - Medicaid plan performance decreased by 2%
- The Committee had a brief discussion of the potential for harms of overprescribing versus the benefits, and decided the benefits outweigh any potential harms for this measure.

5. Related and Competing Measures

- This measure is related to:
  - 0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
- The Committee did not note any issues between these measures.

6. Standing Committee Recommendation for Endorsement: **Y-17**; **N-0**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

9. Appeals

0965 Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Submission | Specifications

0965 Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Description: Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge.

Numerator Statement: Generator patients who receive all medications for which they are eligible:

1. ACE/ARB prescribed at discharge (if eligible for ACE/ARB as described in denominator) AND
2. Beta blockers prescribed at discharge (if eligible for beta blockers as described in denominator)

Denominator Statement: All generator patients surviving hospitalization who are eligible to receive either an ACE/ARB or beta blocker at discharge.

Exclusions: None

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 MEETING 02/06/2020

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap, 1c. Composite - Quality Construct and Rationale)

1a. Evidence: **H-0; M-14; L-2; I-1**; 1b. Performance Gap: **H-3; M-13; L-0; I-0;** 1c. Composite: **H-5; M-12; L-0; I-0**

<u>Rationale</u>:

- The developer stated that the evidence has not changed since this measure's previous review.
- This composite measure has two component measures that assess if all patients with an ICD implant surviving hospitalization receive all medications (ACE/ARB and beta blockers) for which they are eligible at discharge. Because the beta-blocker component may be applied to two separate patient populations (patients with previous MI and patients with LVSD), the developer provided evidence supporting the use of beta-blockers in each of these populations separately.
- The developer provided four guidelines with six guideline statements that recommend beta-blocker therapy for patients with heart failure (HF) or prior MI.
- The developer provided two guidelines with four guideline statements that recommend beta-blocker therapy for patients with left ventricular systolic dysfunction (LVSD), with or without prior MI.
- The developer provided two guidelines with four guideline statements that recommend ACE/ARBs for patients with LVSD, with or without prior MI.
- The Committee explored the relationship between the patient populations in the evidence presented and the patient population included in the measure. Although there was not a direct match, the measured population represents a subset of the larger patient population covered by the evidence.
- The developer provided measure results for 2018 from the National Cardiovascular Data Registry's ICD Registry: mean of 83%, range: 0-100%.
- There is some variation at the median, with Hispanic, Black, and Other groups showing higher results than White and Non-White groups. Dual eligible group scores are very similar to overall scores. Mean scores are similar across groups and similar to the overall mean.
- The composite is an all-or-none construction. The developer states the all-or-none composite reflects the strong recommendations for each process of care included in the composite. They state that combining the measures into one composite provides a perspective of the overall quality of medical therapy while reducing information burden.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity; 2c. Composite Construction)

2a. Reliability: **H-1; M-15; L-0; I-0**; 2b. Validity: **H-5; M-11; L-0; I-0**

0965 Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

2c. Composite Construction: **H-13; M-3; L-0; I-0**

Rationale:

- This measure is deemed complex and would generally be reviewed by the SMP; however, due to a timing issue related to NQF staff feedback and the developer updating the measure specifications, NQF staff granted an exception, and the scientific acceptability was evaluated by the Standing Committee.
- The developer conducted both data element and score-level reliability testing. The data element testing was unchanged from the previous submission.
- A sample of 627 patients from 25 hospitals was selected for interrater reliability (IRR) of the extracted data elements. This was performed by an independent contractor. IRR was performed for six data elements. Kappa values ranged from 0.33 (LVEF assessed) to 0.96 (Procedure type), with most values >0.60. A kappa >0.70 is considered acceptable IRR. This IRR was performed on data from 2010.
- For score-level testing, the developer used a split-sample methodology. The cohort was split into two random samples and scores calculated using the same time frame. For the performance rates and social risk data, unadjusted rates were calculated, and a Pearson correlation coefficient and ICC were computed. For 2018, Pearson correlation coefficient: 0.52, ICC: 0.79, indicating moderate to strong reliability.
- The validity testing was unchanged from the previous submission. The developers provided construct validity results examining the association of patient and hospital performance on the composite measure with adverse outcomes; specifically, mortality and readmission at six months following hospital discharge, and the association between hospital-level performance on the measure and the combination of mortality or readmission at six months. The developer provides patient-level and hospital level results:
    - A significantly smaller proportion of patients discharged on the appropriate medical therapy died or were readmitted within six months of hospital discharge (without meds = 28.37% vs. with meds = 6.28%).
    - Patients treated at hospitals that performed better on the measure had better unadjusted outcomes than those treated at hospitals that performed worse on the measure (correlation coefficient (-0.0998), $p<0.001$).
- The Committee raised questions about which medications are included in the measure.
- The Committee asked if ARNIs, a new drug class used to treat HF, are included. The developer clarified that ARNIs are included in the measure specifications, but not in the measure title.
- The Committee also inquired about hydralazine, which is a preferred medication for African American patients with HF. The developer stated they do not receive race/ethnicity data for calculation, but would instead handle this by having sites indicate African American patients have contraindications to the medications in the measure. This would remove them from the measure denominator. The Committee was satisfied that providers would not be penalized for appropriately prescribing hydralazine.
- To demonstrate the scientific acceptability of the composite construction, the developer conducted empirical validity analysis of the relationship between the individual component measures and the overall composite measure. The individual components were strongly correlated (0.70 or higher for all analyses) with the overall composite. A logistic regression analysis provided by the developer demonstrates that the ACE/ARB and beta-blocker measures explained 89.0% and 68.0% of the overall variance, respectively.

3. Feasibility: H-6; M-9; L-1; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified; 3d. Data collection strategy can be implemented)

Rationale:

0965 Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

- The data elements associated with this measure are routinely generated and acquired during the delivery of standard cardiac care to this patient population. Most of the data elements exist in a structured format within an EHR, and that data can be extracted electronically.
- The developer states a full-time employee can enter roughly 1,200 patient records per year on average.
- The developer notes that participation in the registry is a requirement for Medicare reimbursement purposes, and that almost all hospitals that implant ICDs already participate for this reason.
- The Committee had no concerns about feasibility.

4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Pass-16; No Pass-0** 4b. Usability*:* **H-3; M-13; L-0; I-0**

Rationale:

- The measure is publicly reported through the National Cardiac Disease Registry.
- The developer reports that the mean rate of performance has improved over time, from 74% when the measure was first released (2011-12), to 78% in 2013-14, and 83% in the most recent data year (2018).
- The Committee had no concerns about these criteria.

5. Related and Competing Measures

- This measure is related to:
  - 0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy – Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%)
  - 0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
  - 0071: Persistence of Beta-Blocker Treatment After a Heart Attack
  - 0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
  - 0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)
  - 0117: Beta Blockade at Discharge
  - 0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
- The Committee had no concerns about lack of harmonization or burden from multiple measures.

6. Standing Committee Recommendation for Endorsement: **Y-16**; **N-0**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

9. Appeals

3534 30-Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR)

Submission | Specifications

Description: This measure estimates hospital risk standardized odds ratio for death from all causes within 30 days following transcatheter aortic valve replacement. The measure uses clinical data available in the STS/ACC TVT Registry for risk adjustment. For the purpose of development and testing, the measure used site-reported 30-day follow-up data contained in the STS/ACC TVT Registry.

Numerator Statement: The outcome of this measure is all-cause death within 30 days following a transcatheter aortic valve replacement (TAVR).

Denominator Statement: The target population for the outcome is for individuals who have undergone transcatheter aortic valve replacement.

For development, reassessment and reporting of this measure, we use site reported data from the STS/ACC TVT Registry.

Exclusions:

1) Hospitals need to meet eligibility criteria to be included in the measure.

2) Patients are excluded if:

a) They did not have a first-time TAVR in the episode of care (admission),

b) The TAVR was subsequent to another procedure in the Registry (other TAVR, Mitral Leaflet Clip and/or TMVR) during that admission.

c) The patient is readmitted for a repeat TAVR (re-admission) and the initial TAVR was performed during the rolling three-year time frame for the measure.

d) 30-day mortality status missing.

Adjustment/Stratification: Statistical risk model; No risk stratification

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome

Data Source: Registry Data

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Pass-16; No Pass-0**; 1b. Performance Gap: **H-2; M-13; L-1; I-0**

<u>Rationale</u>:

- The developer presented evidence tying two factors within a hospital's control to improved 30-day mortality rates: appropriate patient selection and volume of TAVR.
- The developer presented odds ratio estimates from registry data covering April 2015 to March 2018. The mean odds ratio was 1.01, with a range of 0.81-1.40.
- In order to explore disparities, the developer modified the measure´s hierarchical model to include indicator variables for African American race, other non-white race, Hispanic ethnicity, and participation in Medicaid. They performed this analysis using data from June 2013 to May 2016 (21,661 patients from 188 hospitals), and using data from April 2015 to March 2018 (49,182 patients from 264 hospitals). For each variable in each time period, the 95% confidence interval around the odds ratio overlapped with the null value of 1.0. The developer concluded that there was no statistically significant association between these variables and 30-day mortality after adjusting for other factors in the hierarchical model ($p>0.05$ for each variable).
- The Committee had no questions regarding the evidence supporting the measure and no concerns about performance gap.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Accepted Scientific Methods Panel (SMP) Rating (Moderate)**; 2b. Validity: **H-0; M-14; L-2; I-0**

Rationale:

- This measure was deemed complex and was evaluated by the SMP.
- To demonstrate reliability of the data elements used in the measure, the developer assessed IRR using data from 40 records selected randomly from four randomly selected facilities.
- The SMP Subgroup initially rated the measure low for reliability due to concerns related to the lack of detail around the testing and sampling methodology, and that not all data elements were evaluated for reliability (or validity).
- In response to the concerns raised, the developer provided additional information regarding the sampling, demonstrating no systematic patient differences between those selected for sampling and the general cohort, and provided IRR results for additional data elements. After discussing the addition information, the SMP then passed the measure on reliability with a moderate rating.
- The NQF SMP's ratings for reliability: H-0; M-6; L-0; I-0.
- The Committee was satisfied with the SMP's review and rationale, and voted unanimously to accept the SMP's rating.
- To demonstrate validity of the data elements, the developers conducted two analyses:
    - Record eligibility assessment: Six hospitals participating in the registry reported all TAVR and mitral-valve replacement cases performed at their facility during a specified time frame. These records were compared to the registry records to verify that cases were not missed (N=366 records).
    - 40 hospitals with at least 10 cases were randomly selected for an audit. From each hospital, 10 baseline and 10 follow-up cases (for 30-day and one-year) were randomly selected for abstraction. Sample included 400 "baseline" records, 400 "30-day" records, and 289 "one-year" records. Developers calculated the prevalence-adjusted and bias-adjusted kappa (PABAK) statistic.
- On initial review, the SMP Subgroup did not reach consensus on validity due to concerns regarding the measure excluding >50% of hospital/patients due to missing data, relatively low values of PABAK for two tested values, lack of data element testing for most variables, and a relatively small testing sample that may or may not be representative of hospitals/patients included in the measure.
- In response to the concerns raised, the developer provided additional information regarding key data elements and thresholds for excluding hospitals/patients. The developer also performed validity testing on additional data elements. The developer defended keeping baseline KCCQ-12 and baseline gait speed in the data model, indicating they anticipate more sites will complete these elements because they are required for the measure. They felt both elements are clinically important for patient evaluation. The SMP then passed the measure on validity with a moderate rating.
- The Committee echoed concerns raised by the SMP around missing data and its potential impact on the measure.
- The Committee revisited the SMP's concerns with whether the missing data affected the measure's validity and if the missing data were due to a feasibility issue. The data elements of concern were the KCCQ and the six-minute walk test, both of which are used to assess patient functional status, and both of which are included in the risk adjustment model.
- Facilities that participate in the registry are excluded from risk-adjusted measure results if these elements are less than 90% complete.
- The developer noted that they are seeing an increase in data capture for these elements, which are important measures of functional status, and that continuing to include the elements in the measure will encourage continued improvement in the use and recording of the data elements. The developer stated that care for patients who are candidates for a TAVR procedure should include functional status assessment.
- The Committee discussed the strength of the evidence for including these elements in the risk adjustment model, and urged the developer to continue to closely monitor the completeness of data submissions and the usefulness of the data for measure calculation and risk adjustment.
- The Committee elected to vote on validity and the measure passed this criterion.

3. Feasibility: H-2; M-12; L-2; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified; 3d. Data collection strategy can be implemented)

Rationale:

- All data elements associated with this measure are routinely generated and acquired during the delivery of standard cardiac care to this patient population, with the exception of the KCCQ and six-minute walk test.
- The developer stated a full-time employee can enter roughly 1,200 patient records per year on average.
- The developer stated that all hospitals performing TAVR participate in the registry as a condition of CMS coverage with evidence decision.
- The Committee was concerned that the missing data elements discussed in the validity section could indicate a feasibility issue, but ultimately decided that the measure meets this criterion.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Pass-16; No Pass-0** 4b. Usability*:* **H-3; M-12; L-1; I-0**

Rationale:

- This is a new measure not currently in use outside of quality improvement programs. In the future, the developer plans to coordinate with the Society of Thoracic Surgeons to publicly report results.
- Between 2014 and 2017, the aggregate 30-day TAVR mortality rate in the analysis population decreased from 5.9% to 2.7%, representing a relative decrease of 54%. The developer stated that some of this decline is due to changes in case mix; however, in the hierarchical logistic regression model for the time period June 2013 to May 2016 accounting for differences in case mix, the estimated odds of mortality decreased 15% per year, representing improvements in care.
- The Committee had no concerns about these criteria.

5. Related and Competing Measures

- This measure is related to:
  - 2561: STS Aortic Valve Replacement (AVR) Composite Score.
- The Committee noted that the measures are harmonized to the extent possible and cover different populations.

6. Standing Committee Recommendation for Endorsement: **Y-16**; **N-0**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

9. Appeals

Measures Not Recommended

0670 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients

Submission | **Specifications**

Description: Percentage of stress SPECT MPI, stress echo, CCTA, or CMR performed in low risk surgery patients for preoperative evaluation

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA, or CMR performed in patients undergoing low risk surgery as a part of the preoperative evaluation

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

Exclusions: None.

Adjustment/Stratification: No risk adjustment or risk stratification **Level of Analysis:** Facility, Clinician : Group/Practice

Setting of Care: Outpatient Services

Type of Measure: Efficiency

Data Source: Other, Registry Data

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: <u>The measure does not meet the Importance criteria</u>

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **H-0; M-16; L-1; I-0** 1b. Performance Gap: **H-0; M-2; L-3; I-12**

<u>Rationale</u>:

- The developer stated that there has been no evidence changes since this measure's last review.
- The developer provided evidence from the 2014 ACC/AHA Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery. The evidence was assigned "B" grade, indicating "data derived from a single randomized trial, or nonrandomized studies."
- The developer noted that "only a few of the studies addressed the surgical population focused on in this measure." The studies are generally focused on higher-risk surgeries than the low-risk surgeries that are a focus of this measure. The developer stated it is reasonable to extrapolate the findings on higher-risk surgeries to low-risk surgeries.
- The Committee noted that no current information was provided on the performance gap for the measure. They felt unable to evaluate performance gap and the measure did not pass this criterion.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Vote not taken** 2b. Validity: **Vote not taken**

3. Feasibility: Vote not taken

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Vote not taken** 4b. Usability*:* **Vote not taken**

5. Related and Competing Measures

N/A

6. Standing Committee Recommendation for Endorsement: **Vote not taken**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

0671 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing after Percutaneous Coronary Intervention (PCI)

Submission | **Specifications**

Description: Percentage of all stress SPECT MPI, stress echo, CCTA and CMR performed routinely after PCI, with reference to timing of test after PCI and symptom status.

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA and CMR performed in asymptomatic patients within two years of the most recent PCI

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA and CMR performed

Exclusions: None

Adjustment/Stratification No risk adjustment or risk stratification **Level of Analysis:** Facility, Clinician : Group/Practice

Setting of Care: Outpatient Services

Type of Measure: Efficiency

Data Source: Other, Registry Data

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: The measure does not meet the Importance criteria

(1a. Evidence; 1b. Performance Gap)

1a. Evidence: **H-0; M-4; L-3; I-10;** Insufficient Evidence with Exception: **Yes-14; No-3**

1b. Performance Gap: **H-0; M-1; L-3; I-13**

Rationale:

- The developer provided a recommendation from the 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease.
- The Committee noted that the recommendation was based on expert opinion and not clinical trials, and therefore did not meet the evidence criterion. The Committee discussed the challenge of performing trials for inappropriate use, and determined it was appropriate to accept the expert opinion and grant an exception to the evidence criterion.
- The Committee noted that no current information was provided on the performance gap for the measure. They felt unable to evaluate performance gap and the measure did not pass this criterion.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Vote not taken** 2b. Validity: **Vote not taken**

3. Feasibility: Vote not taken

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Vote not taken** 4b. Usability*:* **Vote not taken**

5. Related and Competing Measures

N/A

6. Standing Committee Recommendation for Endorsement: **Vote not taken**

7. Public and Member Comment

8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

0672 Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low Risk Patients

Submission | **Specifications**

Description: Percentage of all stress SPECT MPI, stress echo, CCTA, and CMR performed in asymptomatic, low CHD risk patients for initial detection and risk assessment

Numerator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed for asymptomatic, low CHD risk patients for initial detection and risk assessment

Denominator Statement: Number of stress SPECT MPI, stress echo, CCTA, and CMR performed

Exclusions: None

Adjustment/Stratification No risk adjustment or risk stratification **Level of Analysis:** Facility, Clinician : Group/Practice

Setting of Care: Outpatient Services

Type of Measure: Efficiency

Data Source: Other, Registry Data

Measure Steward: American College of Cardiology

STANDING COMMITTEE MEETING 02/06/2020

1. Importance to Measure and Report: The measure does not meet the Importance criteria

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **H-0; M-2; L-1; I-14;** Insufficient Evidence with Exception: **Yes-15; No-2**

1b. Performance Gap: **H-0; M-1; L-6; I-10**

Rationale:

- The developer provided a recommendation from the 2010 ACCF/AHA Guideline for Assessment of Cardiovascular Risk in Asymptomatic Adults.
- The developer also included a USPSTF recommendation against "screening with rest or exercise electrocardiography (ECG) for the prediction of coronary heart disease (CHD) in asymptomatic adults at low risk for CHD events."
- The Committee noted that both recommendations were based on expert opinion and not clinical trials, and therefore did not meet the evidence criterion. The Committee discussed the challenge of performing trials for inappropriate use, and determined it was appropriate to accept the expert opinions and grant an exception to the evidence criterion.
- The Committee noted that no current information was provided on the performance gap for the measure. They felt unable to evaluate performance gap and the measure did not pass this criterion.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **Vote not taken** 2b. Validity: **Vote not taken**

3. Feasibility: Vote not taken

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

4. Use and Usability *(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)* 4a. Use: **Vote not taken** 4b. Usability*:* **Vote not taken**
5. Related and Competing Measures N/A
6. Standing Committee Recommendation for Endorsement: **Vote not taken**
7. Public and Member Comment
8. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

Appendix B: Cardiovascular Portfolio—Use in Federal Programs[1]

NQF #	Title	Federal Programs: Finalized or Implemented as of February 20, 2020
0018	Controlling High Blood Pressure	Medicare and Medicaid Electronic Health Record Incentive Program for Eligible Professionals Medicare Shared Savings Program, Merit-Based Incentive Payment System (MIPS) Program, Medicaid Marketplace Quality Rating System (QRS), Medicaid
0028	Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention	Million Hearts, MIPS, Medicaid Promoting Interoperability Program for Eligible Professionals, Medicare Shared Savings Program
0066	Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy – Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%)	Physician Compare; MIPS
0067	Chronic Stable Coronary Artery Disease: Antiplatelet Therapy	MIPS
0068	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic	MIPS
0070/ 0070e	Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	MIPS, Medicaid Promoting Interoperability Program for Eligible Professionals
0071	Persistence of Beta-Blocker Treatment After a Heart Attack	MIPS
0081/ 0081e	Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	MIPS, Medicaid Promoting Interoperability Program for Eligible Professionals
0083/ 0083e	Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	MIPS, Medicaid Promoting Interoperability Program for Eligible Professionals
0114	Risk-Adjusted Post-Operative Renal Failure	MIPS
0115	Risk-Adjusted Surgical Re-exploration	MIPS
0119	Risk-Adjusted Operative Mortality for CABG	MIPS

[1] Per CMS Measures Inventory Tool as of 03/05/2020

NQF #	Title	Federal Programs: Finalized or Implemented as of February 20, 2020
0129	Risk-Adjusted Prolonged Intubation (Ventilation)	MIPS
0130	Risk-Adjusted Deep Sternal Wound Infection Rate	Hospital Compare, Hospital Outpatient Quality Reporting
0131	Risk-Adjusted Stroke/Cerebrovascular Accident	MIPS
0229	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following heart failure (HF) hospitalization for patients 18 and older	Hospital Compare, Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing
0230	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute myocardial infarction (AMI) hospitalization for patients 18 and older	Hospital Compare, Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing
0290	Median Time to Transfer to Another Facility for Acute Coronary Intervention	Hospital Compare, Hospital Outpatient Quality Reporting
0330	Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSSR) Following Heart Failure Hospitalization	Hospital Readmission Reduction Program (HRRP)
0505	Hospital 30-Day All-Cause, Risk-Standardized Readmission Rate (RSSR) Following Acute Myocardial Infarction (AMI) Hospitalization	Hospital Readmission Reduction Program, Hospital Compare
0643	Cardiac Rehabilitation Patient Referral from an Outpatient Setting	Hospital Readmission Reduction Program, Hospital Compare
0669	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac, Low Risk Surgery	Hospital Compare, Hospital Outpatient Quality Reporting
0670	Cardiac stress imaging not meeting appropriate use criteria: Preoperative evaluation in low risk surgery patients	Merit-Based Incentive Payment System (MIPS) Program (Implemented)
0671	Cardiac stress imaging not meeting appropriate use criteria: Routine testing after percutaneous coronary intervention (PCI)	MIPS
0672	Cardiac stress imaging not meeting appropriate use criteria: Testing in asymptomatic, low risk patients	MIPS
1525	Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy	MIPS
2474	Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation	MIPS

Appendix C: Cardiovascular Standing Committee and NQF Staff

STANDING COMMITTEE

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Appendix D: Measure Specifications

Appendix E1: Related and Competing Measures (tabular)

Comparison of NQF 0018, NQF 0061, NQF 2602, NQF 2606, NQF 0729 and NQF 0076

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
Steward	National Committee for Quality Assurance	National Committee for Quality Assurance	National Committee for Quality Assurance	National Committee for Quality Assurance	MN Community Measurement	MN Community Measurement
Description	The percentage of adults 18-85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure was adequately controlled (<140/90 mm Hg) during the measurement year.	The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level taken during the measurement year is <140/90 mm Hg.	The percentage of patients 18-85 years of age with serious mental illness who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled during the measurement year. Note: This measure is adapted from an existing health plan measure used in a variety of reporting programs for the general population (NQF #0018: Controlling High Blood Pressure). It was originally endorsed in 2009	The percentage of patients 18-75 years of age with a serious mental illness and diabetes (type 1 and type 2) whose most recent blood pressure (BP) reading during the measurement year is <140/90 mm Hg. Note: This measure is adapted from an existing health plan measure used in a variety of reporting programs for the general population (NQF #0061: Comprehensive Diabetes Care: Blood Pressure Control <140/90 mm Hg) which is endorsed by NQF and is stewarded by NCQA.	The percentage of patients 18-75 years of age who had a diagnosis of type 1 or type 2 diabetes and whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following: • HbA1c less than 8.0 mg/dL • Blood Pressure less than 140/90 mmHg • On a statin medication, unless allowed contraindications or exceptions are present • Non-tobacco user • Patient with ischemic vascular disease is on daily aspirin or anti-	The percentage of patients 18-75 years of age who had a diagnosis of ischemic vascular disease (IVD) and whose IVD was optimally managed during the measurement period as defined by achieving ALL of the following: • Blood pressure less than 140/90 mmHg • On a statin medication, unless allowed contraindications or exceptions are present • Non-tobacco user • On daily aspirin or anti-platelet

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			and is owned and stewarded by NCQA. The specifications for the existing measure (Controlling High Blood Pressure NQF #0018) have been updated based on 2013 JNC-8 guideline. NCQA will submit the revised specification for Controlling High Blood Pressure NQF #0018 in the 4th quarter 2014 during NQF's scheduled measure update period. This measure uses the new specification to be consistent with the current guideline.		platelets, unless allowed contraindications or exceptions are present Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component.	medication, unless allowed contraindications or exceptions are present
Type	Outcome: Intermediate Clinical Outcome	Outcome: Intermediate Clinical Outcome	Outcome	Outcome	Composite	Composite
Data Source	Claims, Electronic Health Data, Electronic Health Records,	Claims, Electronic Health Data, Electronic Health Records, Paper	Claims, Electronic Health Records, Paper Medical Records The	Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records The	Electronic Health Records, Paper Medical Records An excel template with	Electronic Health Records, Paper Medical Records AAn excel template with

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	Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan patients. NCQA collects Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system. No data collection instrument provided Attachment 0018_CBP_Value_Sets_Fall_2019-	Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan patients. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system. No data collection instrument provided Attachment 0061_CDC_BP_Control_Value_Sets_Fall 2019-637088223907626862.xlsx	denominator for this measure is based on administrative claims and medical record documentation (this is used to confirm the diagnosis of hypertension identified in claims/encounter data). The numerator for this measure is based on medical record documentation collected in the course of providing care to health plan patients. No data collection instrument provided Attachment 2602_CBP_for_People_With_Mental_Illness_Value_Set-636583543692086216.xlsx	denominator for this measure is based on claim/encounter and pharmacy data. The numerator for this measure is based on medical record documentation collected in the course of providing care to health plan patients. No data collection instrument provided Attachment 2606_BP_Control_for_People_With_Mental_Illness_Value_Sets-636583537864052580.xlsx	formatted columns for data fields is provided. Almost all medical groups in MN (99.5%) extract the information from their EMR. Paper abstraction forms are provided for those clinics who wish to use them as an interim step to create their data file. All data is uploaded in electronic format (.csv file) to a HIPAA secure, encrypted and password protected data portal. We capture information from the clinics about how their data is obtained. In 2018: • 71% (476) clinics had an EMR and pulled all data via query • 26% (176) clinics had an EMR and used a combination of query and manual look up for data collection • 2.2% (15) clinics had an EMR and looked up all data manually	formatted columns for data fields is provided. Almost all the medical groups in MN (99.9%) extract the information from their EMR. Other options have been historically available: Registries can be used as a source of information to create the data file; however groups must ensure that all of their eligible patients are included. Paper abstraction forms are provided for those clinics who wish to use them as an interim step to creating their data file. All data is uploaded in electronic format (.csv file) to a HIPAA secure, encrypted and password protected data portal. Available at measure-specific web page URL

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	637002741932672877.xlsx				• 0.15% (1) clinic had a hybrid EMR and paper record system • 0.15% (1) clinic had paper records only Feasibility Note: 71% of practices can extract all of the information needed via query. Please note that all fields are defined and included in the data dictionary [Tab = Data Field Dictionary] and also included in the data collection guide URL provided in S.1. Available at measure-specific web page URL identified in S.1 Attachment MNCM_Diabetes_Measure_Data_Dictionary_and_Risk_Adj__10-19-2018.xlsx	identified in S.1 Attachment MNCM_-0076_Optimal_Vascular_Care_Specs_Fields_12-2019.xlsx
Level	Health Plan	Health Plan	Health Plan	Health Plan	Clinician : Group/Practice	Clinician : Group/Practice
Setting	Outpatient Services	Outpatient Services	Outpatient Services	Outpatient Services	Outpatient Services	Outpatient Services
Numerator	Patients whose most recent	Patients whose most recent blood	Patients whose most recent blood	Patients whose most recent BP reading is less	The number of patients in the denominator	The number of patients in the

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Statement	blood pressure level was <140/90 mm Hg during the measurement year.	pressure level was <140/90 mm Hg during the measurement year.	pressure (BP) is adequately controlled during the measurement year (after the diagnosis of hypertension) based on the following criteria: -Patients 18-59 years of age as of December 31 of the measurement year whose BP was <140/90 mm Hg. -Patients 60-85 years of age as of December 31 of the measurement year and flagged with a diagnosis of diabetes whose BP was <140/90 mm Hg. -Patients 60-85 years of age as of December 31 of the measurement year and flagged as not having a diagnosis of diabetes whose BP was <150/90 mm Hg.	than 140/90 mm Hg during the measurement year. This intermediate outcome is a result of blood pressure control (<140/90 mm Hg). Blood pressure control reduce the risk of cardiovascular diseases. There is no need for risk adjustment for this intermediate outcome measure.	whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following: • The most recent HbA1c in the measurement period has a value less than 8.0 mg/dL • The most recent Blood Pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg • On a statin medication, unless allowed contraindications or exceptions are present • Patient is not a tobacco user • Patient with ischemic vascular disease (Ischemic Vascular Disease Value Set) is on daily aspirin or anti-platelets, unless allowed	denominator whose IVD was optimally managed during the measurement period as defined by achieving ALL of the following: • The most recent blood pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg • On a statin medication, unless allowed contraindications or exceptions are present • Patient is not a tobacco user • On daily aspirin or anti-platelet medication, unless allowed contraindications or exceptions are present

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					contraindications or exceptions are present	
Numerator Details	There are two data sources and approaches used for collecting data reporting the numerator for this measure: Administrative Claims and Medical Record Review ADMINISTRATIVE CLAIMS Use codes (See code value sets located in question S.2b.) to identify the most recent BP reading taken during an outpatient visit, a nonacute inpatient encounter, or remote monitoring event during the	There are two data sources and approaches used for collecting data and reporting the numerator for this measure: Administrative Claims and Medical Record Review. ADMINISTRATIVE CLAIMS Use codes (See code value sets located in question S.2b.) to identify the most recent blood pressure reading taken during an outpatient visit or a nonacute inpatient encounter or remote monitoring event during the measurement year.	The number of patients whose most recent blood pressure (BP) is adequately controlled during the measurement year, but after the diagnosis of hypertension (See Essential Hypertension Value Set). For an individual's BP to be adequately controlled, both the systolic and diastolic BP must -85meet the following criteria: - Patients 18-59 years of age as of December 31 of the measurement year whose BP was <140/90 mm Hg. - Patients 60-85 years of age as of December 31 of the measurement year	ADMINISTRATIVE: Use automated data to identify the most recent BP reading taken during an outpatient visit (see Outpatient Visit Value Set) or a nonacute inpatient encounter (Nonacute Inpatient Value Set) during the measurement year. The patient is numerator compliant if the BP is <140/90 mm Hg. The patient is not compliant if the BP is =140/90 mm Hg, if there is no BP reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing). If there are multiple BPs on the same date of service, use the lowest systolic and lowest diastolic BP on that date as the representative BP. Organizations that use	Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component and note that all of the denominator criteria apply to the numerator as well, but are not repeated in the numerator codes/ descriptions. HbA1c Date [Date (mm/dd/yyyy)] AND	In order to be numerator compliant all four components must be met * Blood pressure less than 140/90 mmHg AND * On a statin medication, unless allowed contraindications or exceptions are present AND * Non-tobacco user AND * On daily aspirin or anti-platelet medication, unless allowed contraindications or exceptions are present BLOOD PRESSURE COMPONENT Blood Pressure Date [Date (mm/dd/yyyy)] AND BP Systolic [Numeric] AND

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	measurement year. The blood pressure reading must occur on or after the date when the second diagnosis of hypertension (identified using the event/diagnosis criteria). The patient is numerator compliant if the blood pressure is <140/90 mm Hg. The patient is not compliant if the blood pressure is >=140/90 mm Hg, if there is no blood pressure reading during the measurement year or if the reading is incomplete (e.g., the systolic or	The patient is numerator compliant if the blood pressure is <140/90 mm Hg. The patient is not compliant if the blood pressure is =140/90 mm Hg, if there is no blood pressure reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing). If there are multiple blood pressure readings on the same date of service, use the lowest systolic and lowest diastolic blood pressure on that date as the representative blood pressure. Organizations that use CPT Category II codes to identify numerator	and flagged with a diagnosis of diabetes whose BP was <140/90 mm Hg. - Patients 60-85 years of age as of December 31 of the measurement year and flagged as not having a diagnosis of diabetes whose BP was <150/90 mm Hg. To determine if an individual's BP is adequately controlled, the representative BP (i.e., the most recent BP reading during the measurement year but after the diagnosis of hypertension was made) must be identified. Note: Only the medical records of one practitioner or provider team should be used for both the confirmation of the	CPT Category II codes to identify numerator compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for both systolic and diastolic levels. VALUE SET / NUMERATOR COMPLIANCE Systolic Less Than 140 Value Set / Systolic compliant Systolic Greater Than/Equal To 140 Value Set / Systolic not compliant Diastolic Less Than 80 Value Set / Diastolic compliant Diastolic 80–89 Value Set / Diastolic compliant Diastolic Greater Than/Equal To 90 Value	HbA1c Value [Numeric] Numerator component calculation: numerator component compliant is HbA1c during the last 12 months (measurement year) AND most recent HbA1c value is less than 8.0. Enter the date of the most recent HbA1c test during the measurement period. Enter the value of the most recent HbA1c test during the measurement period. Leave BLANK if an HbA1c was never performed. • A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.	BP Diastolic [Numeric] Numerator component calculation: numerator component compliant is BP during the measurement year AND Systolic < 140 AND Diastolic < 90. BP Date Enter the date of the most recent blood pressure result during the measurement period. • A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period. • Do not include BP readings:

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	diastolic level is missing). If there are multiple blood pressure readings on the same date of service, use the lowest systolic and lowest diastolic blood pressure on that date as the presentative blood pressure. Organizations that use CPT Category II codes to identify numerator compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for	compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for both systolic and diastolic levels. VALUE SET / NUMERATOR COMPLIANCE Systolic Less Than 140 Value Set / Systolic compliant Systolic Greater Than or Equal to 140 Value Set / Systolic noncompliant Diastolic Less Than 80 Value Set / Diastolic compliant Diastolic 80-89 Value Set / Diastolic compliant	diagnosis of hypertension and the representative BP. All eligible BP measurements recorded in the records from one practitioner or provider team (even if obtained by a different practitioner) should be considered (e.g., from a consultation note or other note relating to a BP reading from a health care practitioner or provider team). If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator. The numerator should be calculated	Set / Diastolic not compliant MEDICAL RECORD: The organization should use the medical record from which it abstracts data for the other diabetes care indicators such as HbA1c test. If the organization does not abstract for other indicators, it should use the medical record of the provider that manages the patient's diabetes. If that medical record does not contain a BP, the organization may use the medical record of another PCP or specialist from whom the patient receives care. To determine if BP is adequately controlled, the organization must identify the representative BP following the steps below.	• If the HbA1c result is too high to calculate, still enter the HbA1c test date if it is the most recent test result during the measurement period. Blood Pressure Date [Date (mm/dd/yyyy)] AND BP Systolic [Numeric] AND BP Diastolic [Numeric] Numerator component calculation: numerator component compliant is BP during the measurement year AND Systolic < 140 AND Diastolic < 90. Enter the date of the most recent blood pressure result during the measurement period. Leave BLANK if a blood pressure was not obtained during the measurement period. • A test result from a provider outside	o Taken during an acute inpatient stay or an ED visit. o Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole). o Obtained the same day as a major diagnostic or surgical procedure (e.g., EKG/ECG, stress test, administration of IV contrast for a radiology procedure, endoscopy). o Reported by or taken by the patient. • Leave BLANK if a blood pressure was not obtained during the measurement period. BP Systolic

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	both systolic and diastolic levels. VALUE SET / NUMERATOR COMPLIANCE Systolic Less Than 140 Value Set / Systolic compliant Systolic Greater Than or Equal to 140 Value Set / Systolic not compliant Diastolic Less Than 80 Value Set / Diastolic compliant Diastolic 80-89 Value Set / Diastolic compliant Diastolic Greater Than or Equal to 90 Value Set / Diastolic not compliant See attached code value sets. MEDICAL RECORD REVIEW	Diastolic Greater Than or Equal to 90 Value Set / Diastolic not compliant See attached code value sets. MEDICAL RECORD REVIEW The most recent BP level (taken during the measurement year) is <140/90 mm Hg, as documented through administrative data or medical record review. The organization should use the medical record from which it abstracts data for the other measures in the Comprehensive Diabetes Care set. If the organization	using the following steps: Step 1: Identify the patient's Primary Care Provider (PCP). -If the patient had more than one PCP for the time period, identify the PCP who most recently provided care to the patient. -If the patient did not visit a PCP for the time period or does not have a PCP, identify the practitioner who most recently provided care to the patient. -If a practitioner other than the patient's PCP manages the hypertension, the organization may use the medical record of that practitioner. Step 2: Identify the representative BP	Identify the most recent BP reading noted during the measurement year. Do not include BP readings that meet the following criteria: -Taken during an acute inpatient stay or an ED visit. -Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole). -Obtained the same day as a major diagnostic or surgical procedure (e.g., stress test, administration of IV contrast for a radiology procedure, endoscopy). Reported by or taken by the patient. Identify the lowest systolic and lowest diastolic BP reading from the most recent BP notation in the medical	of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period. • Do not include BP readings: o Taken during an acute inpatient stay or an ED visit. o Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole). o Obtained the same day as a major diagnostic or surgical procedure (e.g., EKG/ECG, stress test, administration of IV contrast for a radiology procedure, endoscopy). o Reported by or taken by the patient.	Enter the value of the most recent systolic blood pressure result during the measurement period. • If more than one value is recorded on the most recent date, the lowest value may be submitted. It does NOT need to be from the same reading submitted in Column Z (BP Diastolic). • NOTE: The systolic blood pressure is the upper number in the recorded fraction. For example, the systolic value for a blood pressure of 124/72 mmHg is 124. • Leave BLANK if a blood pressure was not obtained during the measurement period. BP Diastolic

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	The number of patients in the denominator whose most recent blood pressure (both systolic and diastolic) is adequately controlled during the measurement year. For a patient's blood pressure to be controlled the systolic and diastolic blood pressure must be <140/90 mm hg (adequate control). To determine if a member's blood pressure is adequately controlled, the representative blood pressure must be identified.	does not abstract for other measures, it should use the medical record of the provider that manages the patient's diabetes. If that medical record does not contain a BP, the organization may use the medical record of another PCP or specialist from whom the patient receives care. Identify the most recent blood pressure reading noted during the measurement year. Do not include blood pressure readings that meet the following criteria: -Taken during an acute inpatient stay or an ED visit.	level, defined as the most recent BP reading during the measurement year. -The reading must occur after the date when the diagnosis of hypertension was made or confirmed. -If multiple BP measurements occur on the same date, or are noted in the chart on the same date, the lowest systolic and lowest diastolic BP reading should be used. The systolic and diastolic results do not need to be from the same reading -If no BP is recorded during the measurement year, assume that the individual is "not controlled." -Do not include BP readings that meet the following criteria:	record. If there are multiple BPs recorded for a single date, use the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading when multiple readings are recorded for a single date. The patient is not numerator compliant if the BP does not meet the specified threshold or is missing, or if there is no BP reading during the measurement year or if the reading is incomplete (i.e., the systolic or diastolic level is missing).	BP Systolic Enter the value of the most recent systolic blood pressure result during the measurement period. If more than one value is recorded on the most recent date, the lowest systolic value from multiple readings on the same date may be submitted. NOTE: The systolic blood pressure is the upper number in the recorded fraction. For example, the systolic value for a blood pressure of 124/72 mmHg is 124. BP Diastolic Enter the value of the most recent diastolic blood pressure result during the measurement period. If more than one value is recorded on the most recent date, the lowest diastolic value from	Enter the value of the most recent diastolic blood pressure result during the measurement period. • If more than one value is recorded on the most recent date, the lowest value may be submitted. It does NOT need to be from the same reading as submitted in (BP Systolic). • NOTE: The diastolic blood pressure is the lower number in the recorded fraction. For example, the diastolic value for a blood pressure of 124/72 mmHg is 72. • Leave BLANK if a blood pressure was not obtained during the measurement period. CHOLESTEROL MANAGEMENT STATIN COMPONENT

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	All eligible blood pressure measurements recorded in the record must be considered. If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator. Use the following guidance to find the appropriate medical record to review. - Identify the patient's PCP. - If the patient had more than one PCP for the time-period, identify the PCP who most	-Taken on the same day as a diagnostic test or diagnostic or therapeutic procedure that requires a change in diet or change in medication on or one day before the day of the test or procedure, with the exception of fasting blood tests. -Reported by or taken by the patient. Blood pressure readings from remote monitoring devices that are digitally stored and transmitted to the provider may be included. There must be documentation in the medical record that clearly states the reading was taken by an electronic device,	- Taken during an acute inpatient stay or an ED visit - Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole) - Obtained the same day as a major diagnostic or surgical procedure (e.g., stress test, administration of IV contrast for a radiology procedure, endoscopy) - Reported by or taken by the patient		multiple readings on the same date may be submitted. • NOTE: The diastolic blood pressure is the lower number in the recorded fraction. For example, the diastolic value for a blood pressure of 124/72 mmHg is 72. LDL Date [Date (mm/dd/yyyy)] AND LDL Value [Numeric] Numerator component calculation: Is used for the cholesterol component for statin use; patients with low untreated LDL values may not be appropriate for the initiation of statin medication. Enter the date of the most recent LDL test on or prior to the end of the measurement period. Leave BLANK if an LDL was never performed.	LDL Date [Date (mm/dd/yyyy)] AND LDL Value [Numeric] For calculating exceptions to statin use based on very low LDL (< 40 for cardiovascular disease and < 70 for patients with diabetes) Enter the date of the most recent LDL test result between 01/01/2015 and 12/31/2019. • A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result within the allowable time period. • If the LDL result is too high to

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	recently provided care to the patient. - If the patient did not visit a PCP for the time-period or does not have a PCP, identify the practitioner who most recently provided care to the patient. - If a practitioner other than the patient's PCP manages the hypertension, the organization may use the medical record of that practitioner. Identify the most recent blood pressure reading noted during the measurement year.	and results were digitally stored and transmitted to the provider and interpreted by the provider. Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record. If there are multiple blood pressure readings recorded for a single date, use the lowest systolic and lowest diastolic blood pressure on that date as the representative blood pressure. The systolic and diastolic results do not need to be from the same reading when			• A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result within the allowable time period. • If the LDL result is too high to calculate, still enter the LDL test date if it is the most recent test result within the allowable time period. LDL values within the last five years will be used to calculate potential exceptions to being on a statin medication. Leave BLANK if an LDL test was not performed between 01/01/201x and 12/31/201x (five-year increments). Statin Medication [Numeric] AND	calculate, still enter the LDL test date if it is the most recent test result within the allowable time period. • LDL values within the last five years will be used to calculate potential exceptions to being on a statin medication. • Leave BLANK if an LDL test was not performed between 01/01/2015 and 12/31/2019. Enter the value of the most recent LDL test result between 01/01/2015 and 12/31/2019. • Leave BLANK if an LDL test was not performed during the allowable time period, or if the most recent test result was too high to calculate.

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	The blood pressure reading must occur on or after the date when the second diagnosis of hypertension (identified using the event/diagnosis criteria) occurred. Do not include BP readings: - Taken during an acute inpatient stay or an ED visit. - Taken on the same day as a diagnostic test or diagnostic or therapeutic procedure that requires a change in diet or change in medication on or one day before the day of the test or procedure, with	multiple readings are recorded for a single date. The patient is not numerator compliant if the blood pressure does not meet the specified threshold or is missing, or if there is no blood pressure reading during the measurement year or if the reading is incomplete (i.e., the systolic or diastolic level is missing).			Statin Medication Date [Date (mm/dd/yyyy)] AND/OR Station Medication Exception [Numeric] AND Station Medication Exception Date [Date (mm/dd/yyyy)] Numerator component calculation: numerator component compliant if on a statin (prescribed/ ordered) or low LDL value (see above) or documented contraindication/exception is present. Statin Medication: Enter the code that corresponds to whether the patient was prescribed a statin medication or if a statin medication was active on the patient's medication list during the measurement period.	Statin Medication [Numeric] AND Statin Medication Date [Date (mm/dd/yyyy)] AND/OR Station Medication Exception [Numeric] AND Station Medication Exception Date [Date (mm/dd/yyyy)] Numerator component calculation: numerator component compliant if on a statin (prescribed/ ordered) or low LDL value (see above) or documented contraindication/exception is present. Statin Medication: Enter the code that corresponds to whether the patient was prescribed a statin medication or if a statin medication

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	the exception of fasting blood tests. - Reported by or taken by the patient. BP readings from remote monitoring devices that are digitally stored and transmitted to the provider may be included. There must be documentation in the medical record that clearly states the reading was taken by an electronic device, and results were digitally stored and transmitted to the provider and interpreted by the provider. Identify the lowest systolic and lowest				Please refer to Appendix C for a list of statin medications. 1 = Yes, patient was prescribed a statin medication or a statin medication was indicated as active on the patient's medication list during the measurement period. 2 = No, patient was not prescribed a statin medication and a statin medication was not indicated as active on the patient's medication list during the measurement period. The following exceptions to statin medication use will be identified by the Data Portal based on the submitted LDL values: • Patients with ischemic vascular disease aged 21 to 75 years and an LDL result less than 40 mg/dL	was active on the patient's medication list during the measurement period. Please see Appendix A for a list of statin medications. 1 = Yes, patient was prescribed a statin medication, or a statin medication was indicated as active on the patient's medication list during the measurement period. 2 = No, patient was not prescribed a statin medication and a statin medication was not indicated as active on the patient's medication list during the measurement period. • The following exceptions to statin medication use will be identified by the Data Portal

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	diastolic BP reading from the most recent BP notation in the medical record. If multiple readings were recorded for a single date, use the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading. The patient is not compliant if the BP reading is =140/90 mm Hg or is missing, or if there is no BP reading during the measurement year or if the reading is				• Patients aged 40 – 75 years with an LDL result less than 70 mg/dL • Patients aged 21 – 39 years with an LDL less than 190 mg/dL Statin Medication Date: Enter the most recent date of a statin prescription, order or review of active medications list during the measurement period. If no statin prescribed, ordered, or reviewed as an active medication during the measurement period, leave blank Statin Medication Exception: If the patient was NOT prescribed or did not have a statin medication active on their medication list during the measurement period, enter the value that corresponds to any	based on the submitted LDL values: o Patients with ischemic vascular disease aged 21 to 75 years and an LDL result less than 40 mg/dL o Patients aged 40 – 75 years with an LDL result less than 70 mg/dL o Patients aged 21 – 39 years with an LDL less than 190 mg/dL Statin Medication Date Enter the date of the most recent statin prescription, order or review on an active medications list that included a statin during the measurement period. • If a statin was not prescribed, ordered, or reviewed as an active medication during the

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	incomplete (e.g., the systolic or diastolic level is missing).				of the following contraindications or exceptions: 1 = Pregnancy at any time during the measurement period 2 = Active liver disease (liver failure, cirrhosis, hepatitis) 3 = Rhabdomyolysis 4 = End stage renal disease on dialysis 5 = Heart failure 6 = Other provider documented reason: breastfeeding during the measurement period 7 = Other provider documented reason: woman of childbearing age not actively taking birth control during the measurement period 8 = Other provider documented reason: allergy to statin 9 = Drug interaction with a listed medication taken during the measurement period (valid drug-drug	measurement period, leave BLANK. Station Medication Exception If the patient was NOT prescribed or did not have a statin medication active on their medication list during the measurement period (Column AA = 2), enter the value that corresponds to any of the following contraindications or exceptions: 1 = Pregnancy at any time during the measurement period 2 = Active liver disease (liver failure, cirrhosis, hepatitis) 3 = Rhabdomyolysis 4 = End stage renal disease on dialysis 5 = Heart failure 6 = Other provider documented reason: breastfeeding during

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
					interactions include HIV protease inhibitors, nefazodone, cyclosporine, gemfibrozil, and danazol). 10 = Other provider documented reason: intolerance (with supporting documentation of trying a statin at least once within the last five years). Additionally, Myopathy and Myositis (CHOL-05) Value Set may be used to document intolerance to statins. If none of the above contraindications or exceptions are documented, leave BLANK. NOTE: Items 1 – 5 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: Pregnancy V/Z Codes (PREG-01), Pregnancy Diagnosis Codes (PREG-02), Liver	the measurement period 7 = Other provider documented reason: woman of childbearing age not actively taking birth control during the measurement period 8 = Other provider documented reason: allergy to statin 9 = Drug interaction with a listed medication taken during the measurement period (valid drug-drug interactions include HIV protease inhibitors, nefazodone, cyclosporine, gemfibrozil, and danazol). 10 = Other provider documented reason: intolerance (with supporting documentation of trying a statin at least

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
					Disease (CHOL-01), Rhabdomyolysis (CHOL-02), ESRD on Dialysis (CHOL-03), and Heart Failure (CHOL-04) Statin Medication Exception Date: If the patient has a documented contraindication or exception enter the date of the contraindication or exception. If only the month and year are known, enter the first day of the month. Tobacco Status Documentation Date [Date (mm/dd/yyyy)] AND Tobacco Status [Numeric] Numerator component calculation: numerator component compliant if tobacco status within the last two years and status is tobacco-free. Tobacco Status Documentation Date:	once within the last five years). Additionally, Myopathy and Myositis (CHOL-05) Value Set may be used to document intolerance to statins. • If none of the above contraindications or exceptions are documented, leave BLANK. • NOTE: Items 1 – 5 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: Pregnancy V/Z Codes (PREG-01), Pregnancy Diagnosis Codes (PREG-02), Liver Disease (CHOL-01), Rhabdomyolysis (CHOL-02), ESRD on Dialysis (CHOL-03), and Heart Failure (CHOL-04) Statin Medication Exception Date:

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					Enter the most recent date that the patient's tobacco status was documented during the measurement period or year prior. • If the patient's tobacco status is not documented or the date of documentation cannot be determined, leave BLANK Tobacco Status: Enter the code that corresponds to the patient's most recent tobacco status during the measurement period or year prior. 1 = Tobacco free (patient does not use tobacco; patient was a former user and is not a current user) 2 = No documentation 3 = Current tobacco user (tobacco includes any amount of cigarettes, cigars, pipes or smokeless tobacco)	If the patient has a documented contraindication or exception enter the date of the contraindication or exception. • If only the month and year are known, enter the first day of the month. ASPIRIN/ANTIPLATELET COMPONENT Aspirin or Anti-platelet Medication [Numeric] AND Aspirin or Anti-platelet Date [Date (mm/dd/yyyy)] AND/OR Aspirin or Anti-platelet Exception [Numeric] AND Aspirin or Anti-platelet Exception Date [Date (mm/dd/yyyy)] Numerator component calculation: numerator

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					• If the date of the tobacco status documentation is not documented in the patient record, enter 2 • E-cigarettes are not considered tobacco products. Aspirin or Anti-platelet Medication [Numeric] AND Aspirin or Anti-platelet Date [Date (mm/dd/yyyy)] AND/OR Aspirin or Anti-platelet Exception [Numeric] AND Aspirin or Anti-platelet Exception Date [Date (mm/dd/yyyy)] Numerator component calculation: Calculation applied only if patient has ischemic vascular disease (IVD); if no IVD indicated, is a numerator component "free-pass". For patients with IVD, numerator component compliant if indicated on daily	component compliant if indicated on daily aspirin or anti-platelet medication (prescribed/ ordered) or documented contraindication/exception is present. Aspirin or Anti-platelet Medication Enter the code that corresponds to whether the patient is prescribed a daily aspirin product or antiplatelet medication or if an aspirin product or anti-platelet medication was active on the patient's medication list at any time during the measurement period. Please see Appendix B for methods to identify appropriate aspirin products or antiplatelet medications.

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
					aspirin or anti-platelet medication (prescribed/ ordered) or documented contraindication/exception is present. Aspirin or Anti-platelet Medication: For patients with Ischemic Vascular Disease (IVD), enter the code that corresponds to whether the patient is prescribed a daily aspirin product or antiplatelet medication or if an aspirin product or anti-platelet medication was active on the patient's medication list during the measurement period. Please see Appendix D for methods to identify appropriate aspirin products or antiplatelet medications. 1 = Yes, patient was prescribed a daily aspirin product or antiplatelet medication,	1 = Yes, patient was prescribed a daily aspirin product or antiplatelet medication, or one was indicated as active on the patient's medication list during the measurement period. 2 = No, patient was not prescribed a daily aspirin product or antiplatelet medication and one was not indicated as active on the patient's medication list during the measurement period. • Aspirin/narcotic combination medications do not qualify as a daily aspirin product. Aspirin or Anti-platelet Medication Date Enter the date of the most recent daily

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					or one was indicated as active on the patient's medication list during the measurement period. 2 = No, patient was not prescribed a daily aspirin product or antiplatelet medication and one was not indicated as active on the patient's medication list during the measurement period. Aspirin/narcotic combination medications do not qualify as a daily aspirin product. Aspirin or Anti-platelet Date: For patients with IVD, enter the date of the most recent daily aspirin product or anti-platelet medication prescription, order or review of an active medication list that included a daily aspirin product or anti-platelet medication	aspirin product or anti-platelet medication prescription, order or review of an active medication list that included a daily aspirin product or anti-platelet medication during the measurement period. * If a daily aspirin product or anti-platelet medication was not prescribed, ordered or reviewed as an active medication during the measurement period, leave blank. Aspirin or Anti-platelet Medication Exception For patients who were not prescribed or taking a daily aspirin product or anti-platelet medication during the measurement period, enter the code that corresponds to any of

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					during the measurement period. If a daily aspirin product or anti-platelet medication was not prescribed, ordered or reviewed as an active medication during the measurement period leave blank Aspirin or Anti-platelet Medication Exception: For patients with IVD who were not prescribed or taking a daily aspirin product or anti-platelet medication during the measurement period, enter the code that corresponds to any of the following contraindications or exceptions: 1 = Prescribed anti-coagulant medication during the measurement period 2 = History of gastrointestinal bleeding	the following contraindications or exceptions: 1 = Prescribed anti-coagulant medication during the measurement period 2 = History of gastrointestinal bleeding 3 = History of intracranial bleeding 4 = Bleeding disorder 5 = Other provider documented reason: allergy to aspirin or anti-platelets 6 = Other provider documented reason: use of non-steroidal anti-inflammatory agents 7 = Other provider documented reason: documented risk for drug interaction 8 = Other provider documented reason: uncontrolled hypertension (systolic blood pressure

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					3 = History of intracranial bleeding 4 = Bleeding disorder 5 = Other provider documented reason: allergy to aspirin or anti-platelets 6 = Other provider documented reason: use of non-steroidal anti-inflammatory agents 7 = Other provider documented reason: documented risk for drug interaction with a medication taken during the measurement period. 8 = Other provider documented reason: uncontrolled hypertension (systolic blood pressure greater than 180 mmHg and/or diastolic blood pressure greater than 110 mmHg) 9 = Other provider documented reason: gastroesophageal reflux disease (GERD)	greater than 180 mmHg and/or diastolic blood pressure greater than 110 mmHg) 9 = Other provider documented reason: gastroesophageal reflux disease (GERD) If none of the above contraindications or exceptions are documented, leave BLANK. NOTE: Items 1 and 2 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: GI Bleed (ASA-01) and Intracranial Bleed (ASA-02). Aspirin or Anti-platelet Exception Date If the patient has a documented contraindication or exception enter the date of the

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					If none of the above contraindications or exceptions are documented, leave BLANK. NOTE: Items 2 and 3 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: GI Bleed (ASA-01) and Intracranial Bleed (ASA-02). Aspirin or Anti-platelet Medication Exception Date: If the patient has a documented aspirin product or anti-platelet medication exception enter the date of the contraindication or exception.	contraindication or exception. If only the month and year are known, enter the first day of the month. TOBACCO COMPONENT Tobacco Status Documentation Date [Date (mm/dd/yyyy)] AND Tobacco Status [Numeric] Numerator component calculation: numerator component compliant if tobacco status within the last two years and status is tobacco-free. Tobacco Status Documentation Date: Enter the most recent date that the patient's tobacco status was documented during the measurement period or year prior.

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						If the patient's tobacco status is not documented or the date of the documentation cannot be determined, leave BLANK. Tobacco Status: Enter the code that corresponds to the patient's most recent tobacco status during the measurement period or year prior. 1 = Tobacco free (patient does not use tobacco; patient was a former user and is not a current user) 2 = No documentation 3 = Current tobacco user (tobacco includes any amount of cigarettes, cigars, pipes or smokeless tobacco) * If the date of the tobacco status documentation is not

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						documented in the patient record, enter 2. * E-cigarettes are not considered tobacco products. A blank field will create an ERROR upon submission.
Denomination Statement	Patients 18-85 years of age who had at least two visits on different dates of service with a diagnosis of hypertension during the measurement year or the year prior to the measurement year.	Patients 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 and type 2) during the measurement year or the year prior to the measurement year.	All patients 18-85 years of age as of December 31 of the measurement year with at least one acute inpatient visit or two outpatient visits for schizophrenia or bipolar I disorder, or at least one inpatient visit for major depression during the measurement year AND a diagnosis of hypertension on or before June 30th of the measurement year.	All patients 18-75 years of age as of December 31 of the measurement year with at least one acute inpatient visit or two outpatient visits for schizophrenia or bipolar I disorder, or at least one inpatient visit for major depression during the measurement year AND diabetes (type 1 and type 2) during the measurement year or year prior to the measurement year.	Patients ages 18 to 75 with a diagnosis of diabetes (Diabetes Value Set) with any contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND problem list must be queried for diagnosis (Diabetes Value Set). AND patient has at least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible	Patients ages 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period who have a diagnosis of ischemic vascular disease (Ischemic Vascular Disease Value Set) with any contact during the current or prior measurement period OR had ischemic vascular disease (Ischemic Vascular Disease Value Set) present on an active problem list at any time during the measurement period.

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					provider in an eligible specialty for any reason during the measurement period.	Both contacts AND the active problem list must be queried for diagnosis (Ischemic Vascular Disease) AND At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.
Denominator Details	Patients who had continuous enrollment in the measurement year. No more than one gap in continuous enrollment of up to 45 days during the measurement year. If the	There are two ways to identify patients with diabetes: by claim/encounter data and by pharmacy data. The organization must use both methods to identify the eligible population, but a patient only needs	Age: 18-85 years as of December 31 of the measurement year Benefit: Medical Continuous Enrollment: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous	Age: 18-75 years as of December 31 of the measurement year Benefit: Medical Continuous Enrollment: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is	Please also refer to all code lists included in the data dictionary attached in S.2b. • 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period • Patient had a diagnosis of diabetes (Diabetes Value Set) with any	Please also refer to all code lists included in the data dictionary attached in S.2b. Patients ages 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period who have a diagnosis of ischemic vascular disease

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	patient has Medicaid, then no more than a 1-month gap in coverage. Patients are identified for the denominator using claim/encounter data. Patients who had at least two visits on different dates of service with a diagnosis of hypertension during the measurement year or the year prior to the measurement year. Visit type need not be the same for the two visits. Any of the following	to be identified by one method to be included in the measure. Patients may be identified as having diabetes during the measurement year or the year prior to the measurement year. CLAIM/ENCOUNTER DATA Patients who met any of the following criteria during the measurement year of the year prior to the measurement year (count services that occur over both years): - At least one acute inpatient encounter with a diagnosis of diabetes without telehealth. - At least one acute inpatient	enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the individual may not have more than a 1-month gap in coverage (i.e., an individual whose coverage lapses for 2 months [60 days] is not considered continuously enrolled). Identify Serious Mental Illness: Identify patients with a serious mental illness. They must meet at least one of the following criteria during the measurement year or the year prior: At least one acute inpatient claim/encounter with any diagnosis of schizophrenia, bipolar I disorder, or major depression using any of the	verified monthly, the individual may not have more than a 1-month gap in coverage (i.e., an individual whose coverage lapses for 2 months [60 days] is not considered continuously enrolled). All patients 18-75 years of age as of December 31 of the measurement year with a serious mental illness [see SMI Value Set] and diabetes (type 1 and type 2) [see Diabetes Value Set] The following steps should be followed to identify patients with a serious mental illness and a diagnosis for diabetes: (1) Identify Serious Mental Illness Step 1: Identify Patients with a serious mental illness. They must meet at least one of the following criteria during	contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND the active problem list must be queried for diagnosis (Diabetes Value Set). • At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period Eligible specialties: Family Medicine, Internal Medicine, Geriatric Medicine, Endocrinology Eligible providers: Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice	(Ischemic Vascular Disease Value Set) with any contact during the current or prior measurement period OR had ischemic vascular disease (Ischemic Vascular Disease Value Set) present on an active problem list at any time during the measurement period. Both contacts AND the active problem list must be queried for diagnosis (Ischemic Vascular Disease) AND At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

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	combinations meet criteria: - Outpatient visit with any diagnosis of hypertension - A telephone visit with any diagnosis of hypertension - An online assessment with any diagnosis of hypertension Only one of the two visits may be a telephone visit, an online assessment or an outpatient telehealth visit. Identify outpatient telehealth visits by the presence of a telehealth modifier or the presence of a telehealth POS code associated	discharge with a diagnosis of diabetes on the discharge claim. To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. - At least two outpatient visits, observation visits, telephone visits, online assessments, ED visits, nonacute inpatient encounters or nonacute inpatient discharges, on different dates of service, with a diagnosis of diabetes. Visit type	following code combinations: - BH Stand Alone Acute Inpatient Value Set with one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set - Major Depression Value Set - BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set - Major Depression Value Set At least two visits in an outpatient, intensive outpatient, partial	the measurement year or the year prior: At least one acute inpatient claim/encounter with any diagnosis of schizophrenia, bipolar I disorder, or major depression using any of the following code combinations: • BH Stand Alone Acute Inpatient Value Set with one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set o Major Depression Value Set • BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set	Registered Nurses (APRN)	Eligible Specialties: Family Medicine, Internal Medicine, Geriatric Medicine, Cardiology Eligible Providers: Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurses (APRN)

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	with the outpatient visit. See attached code value sets.	need not be the same for the two visits. To identify a nonacute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the discharge date for the stay. -- Only include nonacute inpatient encounters without telehealth. -- Only one of the two visits may be an outpatient telehealth visit, a telephone visit or an online assessment. Identify telehealth visits by the presence of a	hospitalization, ED or non-acute inpatient setting, on different dates of service, with any diagnosis of schizophrenia or bipolar I disorder. Any two of the following code combinations meet criteria: - BH Stand Alone Outpatient/PH/IOP Value Set with one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set - BH Outpatient/PH/IOP Value Set with BH Outpatient/PH/IOP POS Value Set and one of the following diagnoses:	o Major Depression Value Set At least two visits in an outpatient, intensive outpatient, partial hospitalization, ED or non-acute inpatient setting, on different dates of service, with any diagnosis of schizophrenia or bipolar I disorder. Any two of the following code combinations meet criteria: • BH Stand Alone Outpatient/PH/IOP Value Set with one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set • BH Outpatient/PH/IOP Value Set with BH Outpatient/PH/IOP POS Value Set and one of the following diagnoses: o Schizophrenia Value Set		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
		telehealth modifier or the presence of a telehealth POS code associated with the outpatient set. See attached code value sets. PHARMACY DATA Patients who were dispensed insulin or hypoglycemics/antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year. PRESCRIPTIONS TO IDENTIFY MEMBERS WITH DIABETES DESCRIPTION / PRESCRIPTION Alpha-glucosidase inhibitors / Acarbose, Miglitol Amylin analogs / Pramlintide	- Schizophrenia Value Set - Bipolar Disorder Value Set - ED Value Set with one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set - BH ED Value Set with BH ED POS Value Set and one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set - BH Stand Alone Nonacute Inpatient Value Set with one of the following diagnoses:	o Bipolar Disorder Value Set • ED Value Set with one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set • BH ED Value Set with BH ED POS Value Set and one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set • BH Stand Alone Nonacute Inpatient Value Set with one of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set • BH Nonacute Inpatient Value Set with BH Nonacute Inpatient POS Value Set and one		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
		Antidiabetic combinations / Alogliptin-metformin, Alogliptin-pioglitazone, Canagliflozin-metformin, Dapagliflozin-metformin, Empagliflozin-linagliptin, Empagliflozin-metformin, Glimepiride-pioglitazone, Glipizide-metformin, Glyburide-metformin, Linagliptin-metformin, Metformin-pioglitazone, Metformin-repaglinide, Metformin-rosiglitazone, Metformin-saxagliptin, Metformin-sitagliptin	- Schizophrenia Value Set - Bipolar Disorder Value Set - BH Nonacute Inpatient Value Set with BH Nonacute Inpatient POS Value Set and one of the following diagnoses: - Schizophrenia Value Set - Bipolar Disorder Value Set Identify Hypertension: A diagnosis of hypertension is identified if there is at least one outpatient visit (Outpatient CPT Value Set) with a diagnosis of hypertension (Essential Hypertension Value Set) during the first	of the following diagnoses: o Schizophrenia Value Set o Bipolar Disorder Value Set (2) Identify Diabetes Step 2: Of the patients identified in Step 1, identify patients with diabetes (see Diabetes Value Set) during the measurement year or the year prior using the following data: Claim/encounter data: • At least two outpatient visits (see Outpatient Value Set), observation visits (see Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (see Nonacute Inpatient Value Set) on different dates of service, with a diagnosis of diabetes (see Diabetes Value Set). Visit type need not be		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
		Insulin / Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin degludec, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin regular human, Insulin human inhaled Meglitinides / Nateglinide, Repaglinide Glucagon-like peptide-1 (GLP1) agonists / Dulaglutide, Exenatide, Albiglutide, Liraglutide Sodium glucose cotransporter 2 (SGLT2) inhibitor / Canagliflozin,	six months of the measurement year and confirmed with a notation of one of the following in the medical record on or before June 30 of the measurement year: Hypertension Intermittent HTN HTN History of HTN High BP Hypertensive vascular disease (HVD) Hyperpiesia Hyperpiesis Borderline HTN Intermittent HTN The notation of hypertension may appear on or before June 30 of the measurement year, including prior to the measurement year. It does not matter if hypertension was treated or is	the same for the two visits. • At least one acute inpatient encounter (see Acute Inpatient Value Set) with a diagnosis of diabetes (see Diabetes Value Set). Pharmacy data: • Patients who were dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year (see Table 1) Both methods to identify the eligible population should be used, however, an individual need only be identified by one to be included in the measure. TABLE 1. PRESCRIPTIONS TO IDENTIFY PATIENTS WITH DIABETES Alpha-glucosidase inhibitors:		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
		Dapagliflozin, Empagliflozin Sulfonylureas / Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide Thiazolidinediones / Pioglitazone, Rosiglitazone Dipeptidyl peptidase-4 (DDP-4) inhibitors / Alogliptin, Linagliptin, Saxagliptin, Sitagliptin Note: Glucophage/metformin as a solo agent is not included because it is used to treat conditions other than diabetes; members with diabetes on these medications are identified through	currently being treated. The notation indicating a diagnosis of hypertension may be recorded in any of the following documents: Problem list (this may include a diagnosis prior to June 30 of the measurement year or an undated diagnosis; see Note at the end of this section) Office note Subjective, Objective, Assessment, Plan (SOAP) note Encounter form Telephone call record Diagnostic report Hospital discharge summary Statements such as “rule out HTN,” “possible HTN,” “white-coat HTN,”	Acarbose, Miglitol Amylin analogs: Pramlinitide Antidiabetic combinations: Glimepiride-pioglitazone, Glimepiride-rosiglitazone, Glipizide-metformin, Glyburide-metformin, Metformin-pioglitazone, Metformin-rosilitazone, Metformin-sitagliptin, Saxagliptin, Sitagliptin-simvastatin Insulin: Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin inhalation, Insulin isophane beef-pork, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
		diagnosis codes only.	"questionable HTN" and "consistent with HTN" are not sufficient to confirm the diagnosis if such statements are the only notations of hypertension in the medical record. If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator. Flag to identify diabetes: After the denominator is identified, assign each patient a flag to identity if the patient does or does not have diabetes as identified by claims/encounter and pharmacy data (see description below). The flag is	regular human, Insulin zinc human Meglitinides: Nateglinide, Repaglinide Miscellaneous antidiabetic agents: Exenatide, Liraglutide, Metformin-repaglinide, Sitagliptin Sulfonylureas: Acetohexamide, Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide Thiazolidinediones: Pioglitazone, Rosiglitazone		

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
			used to determine the appropriate BP threshold to use during numerator assessment. Assign a flag of diabetic to patients who were identified as diabetic using claims/encounter and pharmacy data. The organization must use both methods to identify patients with diabetes, but a patient only needs to be identified by one method. Claim/encounter data: -At least two outpatient visits (see Outpatient Value Set), observation visits (see Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (see Nonacute Inpatient			

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
			Value Set) on different dates of service, with a diagnosis of diabetes (see Diabetes Value Set). Visit type need not be the same for the two visits. -At least one acute inpatient encounter (see Acute Inpatient Value Set) with a diagnosis of diabetes (see Diabetes Value Set). Pharmacy data: -Patients who were dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year (see Table 1). TABLE 1. PRESCRIPTIONS TO IDENTIFY PATIENTS WITH DIABETES			

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
			Alpha-glucosidase inhibitors: Acarbose, Miglitol Amylin analogs: Pramlinitide Antidiabetic combinations: Glimepiride-pioglitazone, Glimepiride-rosiglitazone, Glipizide-metformin, Glyburide-metformin, Metformin-pioglitazone, Metformin-rosilitazone, Metformin-sitagliptin, Saxagliptin, Sitagliptin-simvastatin Insulin: Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin inhalation, Insulin			

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
			isophane beef-pork, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin regular human, Insulin zinc human Meglitinides: Nateglinide, Repaglinide Miscellaneous antidiabetic agents: Exenatide, Liraglutide, Metformin-repaglinide, Sitagliptin Sulfonylureas: Acetohexamide, Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide Thiazolidinediones: Pioglitazone, Rosiglitazone			

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
			Assign a flag of not diabetic to patients who do not have a diagnosis of diabetes during the measurement year or year prior to the measurement year and who meet either of the following criteria: - A diagnosis of polycystic ovaries (Polycystic Ovaries Value Set), in any setting, any time during the patient's history through December 31 of the measurement year. - A diagnosis of gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.			

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
Exclusions	This measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings. Additionally, this measure excludes patients with evidence of end-stage renal disease, dialysis, nephrectomy, or kidney transplant on or prior to the December 31 of the measurement year. It also excludes female patients with a	This measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings. Additionally, exclude patients who had a diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year and who did NOT have a diagnosis of diabetes. These patients are sometimes pulled	All patients who meet one or more of the following criteria should be excluded from the measure: - Evidence of end-stage renal disease (ESRD) or kidney transplant - A diagnosis of pregnancy	Patients who do not have a diagnosis of diabetes and meet one of the following criteria may be excluded from the measure: -Patients with a diagnosis of polycystic ovaries. -Patients with gestational or steroid-induced diabetes.	Valid allowable exclusions include patients who were a permanent resident of a nursing home, pregnant, died or were in hospice or palliative care during the measurement year.	The following exclusions are allowed to be applied to the eligible population: permanent nursing home residents, receiving hospice or palliative care services, or died prior to the end of the measurement period.

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	diagnosis of pregnancy during the measurement year, and patients who had a nonacute inpatient admission during the measurement year.	into the denominator via pharmacy data. They are then removed once no additional diagnosis of diabetes (Type 1 or Type II) is found.				
Exclusion Details	ADMINISTRATIVE CLAIMS Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the service began. These patients may be identified using various methods, which may include but are not limited to enrollment	ADMINISTRATIVE CLAIMS Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the service began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or	All patients who meet one or more of the following criteria may be excluded from the measure: - All patients with evidence of end-stage renal disease (ESRD) (see ESRD Value Set; ESRD Obsolete Value Set) or kidney transplant (see Kidney Transplant Value Set) on or prior to December 31 of the measurement year. Documentation in the medical record must include a dated	Patients who do not have a diagnosis of diabetes (see Diabetes Value Set), in any setting, during the measurement year or year prior to the measurement year and who meet either of the following criteria: -A diagnosis of polycystic ovaries (see Polycystic Ovaries Value Set), in any setting, any time during the person's history through December 31 of the measurement year. -A diagnosis of gestational diabetes or	• Patient was pregnant during measurement period (ICD-10 O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.311, O24.312, O24.313, O24.319, O24.32, O24.33, O24.811, O24.812, O24.813, O24.819, O24.82, O24.83, O24.911, O24.912, O24.913, O24.919, O24.92, O24.93 • Patient was a permanent nursing	* Patient was a permanent nursing home resident at any time during the measurement period * Patient was in hospice or receiving palliative care at any time during the measurement period * Patient died prior to the end of the measurement period

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	data, medical record or claims/encounter data. Exclude adults who meet any of the following criteria: - Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following: -- Enrolled in an Institutional SNP (I-SNP) any time during the measurement year. -- Living long-term in an institution any time during the measurement year as identified by the	claims/encounter data. Exclude adults who meet any of the following criteria: - Medicare adults 66 years of age and older as of December 31 of the measurement year who meet either of the following: -- Enrolled in an Institutional SNP (I-SNP) any time during the measurement year. -- Living long-term in an institution any time during the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run data of the file to determine if a member had an LTI	note indicating evidence of ESRD, kidney transplant or dialysis. - All patients with a diagnosis of pregnancy (see Pregnancy Value Set) during the measurement year.	steroid-induced diabetes (see Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.	home resident during the measurement period • Patient was in hospice or palliative care at any time during the measurement period, • Patient died prior to the end of the measurement period	

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	LTI flag in the Monthly Membership Detail Data File. Use the run data of the file to determine if a patient had an LTI flag during the measurement year. - Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Patients must meet BOTH of the following frailty and advanced illness criteria to be excluded: 1. At least one claim/encounter for frailty during the	flag during the measurement year. - Adults 66 years of age and older as of December 31 of the measurement year (all product lines) with frailty and with advanced illness. Patients must meet BOTH of the following frailty and advanced illness criteria to be excluded: 1. At least one claim/encounter for frailty during the measurement year. 2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years):				

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	measurement year. 2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years): -- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two	-- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters nonacute inpatient discharges on different dates of services, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the discharge date for the stay.				

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	visits. To identify a nonacute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the discharge date for the stay. -- At least one acute inpatient encounter with an advanced illness diagnosis. -- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge:	-- At least one acute inpatient encounter with an advanced illness diagnosis. -- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. -- A dispensed dementia medication DEMENTIA MEDICATIONS DESCRIPTION / PRESCRIPTION Cholinesterase inhibitors /				

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. -- A dispensed dementia medication. DEMENTIA MEDICATIONS DESCRIPTION / PRESCRIPTION Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine Miscellaneous central nervous system agents / Memantine - Members 81 years of age and older as of December 31 of the	Donepezil; Galantamine; Rivastigmine Miscellaneous central nervous system agents / Memantine Exclude patients with gestational diabetes or steroid diabetes. Codes associated with identifying these identifying exclusions are attached in a separate file with code value sets. See attached code value sets. MEDICAL RECORD Exclusionary evidence in the medical record must include a note indicating the patient did NOT have a diagnosis of diabetes, in any setting, during the measurement year				

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	measurement year (all product lines) with frailty during the measurement year. Exclude patients with evidence of end-stage renal disease, dialysis, nephrectomy, or kidney transplant on or prior to December 31 of the measurement year, female patients with a diagnosis of pregnancy during the measurement year, and patients who had a nonacute inpatient admission during the measurement year. To identify nonacute	or the year prior to the measurement year AND had a diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year.				

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	inpatient admissions: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the admission date for the stay. See attached code value sets. MEDICAL RECORD REVIEW Exclusionary evidence in the medical record must include a note indicating diagnosis of pregnancy or evidence of a nonacute inpatient admission during					

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	the measurement year, or evidence of ESRD, dialysis, nephrectomy or kidney transplant any time during the patient's history through December 31 of the measurement year.					
Risk Adjustment	No risk adjustment or risk stratification	No risk adjustment or risk stratification	No risk adjustment or risk stratification	No risk adjustment or risk stratification	Statistical risk model	Statistical risk model
Stratification	N/A	No stratification	Not applicable.	Not applicable.	The diabetes population is not currently stratified when publicly reported on our consumer website, MN HealthScores. The data is, however, stratified by public (MN Health Care Programs- Prepaid Medical Assistance including dual eligibles, MinnesotaCare, and General Assistance	The measure for the ischemic vascular disease population is not currently stratified when publicly reported on our consumer website, MN HealthScores. The data is, however, stratified by insurance product in our 2019 Health Care

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					Medical Care) and private purchasers for our 2017 Health Care Disparities Report. This report notes a gap in outcomes of fifteen percentage points between diabetic patients in public programs and other purchasers. http://mncm.org/wp-content/uploads/2018/03/2017-Disparities-Report-FINAL-3.26.2018.pdf	Disparities Reports by insurance type and race/ethnicity/language and country of origin. https://mncm.org/wp-content/uploads/2019/04/mncm-disparities-report-by-insurance-2019.pdf https://mncm.org/reports-and-websites/reports-and-data/health-equity-of-care-report/ These reports note gaps in outcomes for ischemic vascular disease patients in public programs versus other purchasers (6.6%) and disparities by race and ethnicity (as much as 12% for Black or African American and American Indian or Alaskan Natives)

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Ratio better quality = higher score
Algorithm	STEP 1: Determine the eligible population. To do so, identify adults who meet all specified criteria. - AGES: 18-75 years as of December 31 of the measurement year. - EVENT/DIAGNOSIS: Identify patients with hypertension in two ways: by claim/encounter data and by medical record data. SEE responses in S.6 and S.7 for eligible population and	STEP 1: Determine the eligible population. To do so, identify patients who meet all the specified criteria. - AGES: 18-75 years as of December 31 of the measurement year. - EVENT/DIAGNOSIS: Identify patients with diabetes in two ways: by claim/encounter data and by pharmacy data. SEE S.6 and S.7 for eligible population and denominator criteria and details. STEP 2: Exclude patients who meet the exclusion criteria. SEE S.8	Step 1: Identify patients with serious mental illness (schizophrenia, bipolar I disorder, and major depression). Step 2: Identify patients from step 1 who also have a diagnosis of hypertension in claims and confirmed the hypertension diagnosis in medical records. Step 3: Exclude patients who meet the exclusion criteria as specified in the "Denominator Exclusion Details" section. This is the denominator. Step 4: Of those in the denominator, identify the lowest	Step 1: Identify patients with serious mental illness. Step 2: Identify patients from step 1 who also have a diagnosis of diabetes during the measurement year or the year prior. Step 3: Exclude patients who meet the exclusion criteria as specified in the "Denominator Exclusion Details" section. Step 4: Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record. Step 5. Determine whether the result was <140/90 mm Hg. Step 6: Calculate the rate by dividing the numerator (Step 5) by	This measure is calculated by submitting a file of individual patient values (e.g. blood pressure, A1c value, etc.) to a HIPAA secure data portal. Programming within the data portal determines if each patient is a numerator case and then a rate is calculated for each clinic site. Please also refer to the measure calculation algorithms submitted within the data dictionary for this measure. If any component of the numerator is noncompliant for any one of the five components, then the patient is numerator noncompliant for the composite patient level	This measure is calculated by submitting a file of individual patient values (e.g. blood pressure, tobacco status, etc) to a HIPAA secure data portal. Programming within the data portal determines if each patient is a numerator case and then a rate is calculated for each clinic site. Please also refer to the measure calculation algorithms submitted within the data dictionary for this measure. If any component of the numerator is noncompliant for any one of the four components, then the patient is numerator noncompliant for the composite patient

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	denominator criteria and details. STEP 2: Exclude patients who meet the exclusion criteria. SEE responses in S.8 and S.9 for denominator exclusion criteria and details. STEP 3: Determine the number of patients in the eligible population who had a blood pressure reading during the measurement year through the search of administrative data systems or medical record data. STEP 4: Identify the lowest systolic and	and S.9 for denominator exclusion criteria and details. STEP 3: Determine the number of patients in the eligible population who had a blood pressure reading during the measurement year through the search of administrative data systems or medical record data. STEP 4: Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record. STEP 5. Determine whether the result was <140/90 mm Hg.	systolic and lowest diastolic BP reading from the most recent BP notation in the medical record. Step 5: Calculate the rate by dividing the number of patients whose most recent blood pressure is adequately controlled by the denominator (after exclusions). 123834| 140881| 135810	the denominator (after exclusions) (Step 3). 123834| 140881| 135810	all-or none optimal diabetes care measure. Numerator logic is as follows: A1c Component: Is the HbA1c date in the measurement period? If no, is numerator noncompliant for this component. If yes, assess next variable. Is the HbA1c value less than 8.0? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Note: A1c needs to occur during the measurement year AND most recent value less than 8.0 Assess next component. Blood Pressure Component: Is Blood Pressure date in the measurement period? If no, is numerator noncompliant for this	level all-or none optimal vascular care measure. Numerator logic is as follows: Blood Pressure Component: Is Blood Pressure date in the measurement year? If no, is numerator noncompliant for this component. If yes, assess next variable. BP Systolic < 140? If no, is numerator noncompliant for this component. If yes, assess next variable. BP Diastolic < 90? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Note: BP needs to occur during the measurement year AND most recent BP systolic less than 140

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	lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record. STEP 5: Determine whether the result was <140/90 mm Hg. STEP 6: Calculate the rate by dividing the numerator (STEP 5) by the denominator (after exclusions) (STEP 2).	STEP 6: Calculate the rate by dividing the numerator (STEP 5) by the denominator (after exclusions) (STEP 2).			component. If yes, assess next variable. BP Systolic < 140? If no, is numerator noncompliant for this component. If yes, assess next variable. BP Diastolic < 90? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Note: BP needs to occur during the measurement year AND most recent BP systolic less than 140 AND BP diastolic less than 90 Assess next component. Cholesterol Statin Use Component: Is the patient on a statin medication? If yes, and most recent date is in the measurement year, is numerator compliant for this component. If no, assess next variable. For patients not on a statin the following	AND BP diastolic less than 90 Assess next component. Cholesterol Statin Use Component: Is the patient on a statin medication? If yes, and most recent date is in the measurement year, is numerator compliant for this component. If no, assess next variable. For patients not on a statin the following variables are used to assess numerator compliance related to contraindications or exceptions to statin use: Is the patient age 18 to 20? If yes, numerator compliant (free-pass), if no, assess next variable. Patients age 21 to 75. Is their most recent LDL in the last five

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					variables are used to assess numerator compliance related to contraindications or exceptions to statin use: Is the patient age 18 to 20? If yes, numerator compliant (free-pass), if no, assess next variable. Is the patient age 21 to 75? Do they have ischemic vascular disease (IVD)? If Yes IVD, is their most recent LDL in the last five years less than 40? If Yes, numerator compliant (free-pass), if no, assess next variable. Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin,	years less than 40? If Yes, numerator compliant (free-pass), if no, assess next variable. Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

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					or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator. If No IVD, is the patient age 21 to 39 and is their most recent LDL in the last 5 years greater than or equal to 190? If No, numerator compliant (free-pass). If Yes LDL greater than or equal to 190, does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying	Note: Patient is either on a statin (prescribed/ ordered) during the measurement year or has a valid exception either by age, presence or absence of ischemic vascular disease, low untreated LDL or valid contraindication/ exception. Assess next component. Tobacco-Free Component: Is Tobacco Status = 1 (Tobacco Free) and Tobacco Assessment Date a valid date? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Assess next component. Daily Aspirin/ Anti-platelet Component:

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					a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator. If No IVD, no LDL greater than or equal to 190 for patients ages 40 to 70, is their most recent LDL in the last five years less than 70? If Yes, numerator compliant (free-pass), if no, assess next variable. Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes,	Is the patient on daily aspirin or an antiplatelet? If yes, and date of most recent aspirin/ anti-platelet is in the measurement year is numerator compliant, if no, assess next variable. Does the patient have a valid contraindication/ exception to aspirin anti-platelet use defined as one of the following: anti-coagulant medication, history of gastrointestinal bleed, history of intracranial bleed, allergy, or physician documented reasons related to: risk of drug interaction, use of NSAIDS, uncontrolled HTN or gastro-intestinal reflux disease. If yes, is numerator compliant for this component. If

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					is numerator compliant for this component. If no, fail this numerator component and remains in the denominator. Note: Patient is either on a statin (prescribed/ ordered) during the measurement year or has a valid exception either by age, presence or absence of ischemic vascular disease, low untreated LDL or valid contraindication/ exception. Assess next component. Tobacco-Free Component: Is Tobacco Status = 1 (Tobacco Free) and Tobacco Assessment Date a valid date? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Assess next component. Daily Aspirin/ Anti-platelet Component:	no, fail this numerator component and remains in the denominator. Note: Patients are either on daily aspirin (indicated/ prescribed/ ordered) or an anti-platelet prescribed/ ordered) during the measurement year or has a valid contraindication/ exception. If all of the above numerator components are in compliance, then the patient calculated as a numerator case for the optimal vascular care measure.

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					Does the patient have cardiovascular/ ischemic vascular disease? If no, is numerator compliant (free-pass), if yes assess next variable. Is the patient on daily aspirin or an antiplatelet? If yes, and date of most recent aspirin/ anti-platelet is in the measurement year is numerator compliant, if no, assess next variable. Does the patient have a valid contraindication/ exception to aspirin anti-platelet use defined as one of the following: anti-coagulant medication, history of gastrointestinal bleed, history of intracranial bleed, allergy, or physician documented reasons related to: risk of drug interaction, use of NSAIDS, uncontrolled HTN or gastro-intestinal reflux disease. If yes, is numerator compliant for	

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					this component. If no, fail this numerator component and remains in the denominator. Note: Patients with ischemic vascular disease are either on daily aspirin (indicated/ prescribed/ ordered) or an anti-platelet prescribed/ ordered) during the measurement year or has a valid contraindication/ exception. If all of the above numerator components are in compliance, then the patient calculated as a numerator case for the optimal diabetes care measure.	
Submission items	5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	5.1 Identified measures: 5a.1 Are specs completely harmonized? Yes	5.1 Identified measures: 0018 : Controlling High Blood Pressure 5a.1 Are specs completely harmonized? Yes	5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg) 0545 : Adherence to Statins for Individuals with Diabetes Mellitus	5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy 0543 : Adherence to Statin Therapy for

	0018: Controlling High Blood Pressure	0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)	2602: Controlling High Blood Pressure for People with Serious Mental Illness	2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)	0729: Optimal Diabetes Care	0076: Optimal Vascular Care
	2602 : Controlling High Blood Pressure for People with Serious Mental Illness 2606 : Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: There are several related measures that assess blood pressure control	5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0061 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level is <140/90 mm Hg. Measure 0729 is a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult diabetes patients who have optimally managed modifiable risk factors including blood pressure and	5a.2 If not completely harmonized, identify difference, rationale, impact: This measure was adapted from the existing measure (Controlling High Blood Pressure NQF #0018) for the subpopulation of people with serious mental illness who have a higher risk of disease and for whom there is evidence of disparity in treatment compared to the general population. The numerator of this measure is consistent with the measure used for the general population while the denominator has been adapted to facilitate an adequate number of individuals with	5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: This measure was adapted from the existing measure (Comprehensive Diabetes Care: Blood Pressure Control <140/90 mm Hg NQF #0061) for the subpopulation of people with serious mental illness who have a higher risk of disease and for whom there is evidence of disparity in treatment compared to the general population. The numerator of this measure is consistent with the measure used for the general population while the denominator has been adapted to focus on individuals with serious mental illness. NCQA is	0575 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%) 2712 : Statin Use in Persons with Diabetes 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: Denominator differences due to data source, different composite measure construct and philosophical beliefs of our measure development work group. Please see 5b.1. 5b.1 If competing, why superior or rationale for additive value: 2 measures are part of a composite measure that is stewarded by NCQA.	Individuals with Cardiovascular Disease 0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet 0073 : Ischemic Vascular Disease (IVD): Blood Pressure Control 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: There are some differences noted in the denominator definitions, source data and settings of care. #0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet AND

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	but are either focused on different population, use different data sources or are specified at different levels of accountability than NQF 0018. Measure 0061 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level is <140/90 mm Hg. Measure 2602 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage	four other indicators. NCQA's measure 0061 is included with five other NCQA diabetes measures. The five other diabetes measures are individually NQF endorsed (Endocrine Maintenance Phase 1). Together, the six NCQA individual diabetes measures (including measure 0061) make a set of diabetes HEDIS measures but are not considered all or nothing. NCQA uses individual measures to provide health plans and others the opportunity to measure, report and incentivize each aspect of quality care for the	serious mental illness. NCQA is the owner and steward of the existing NQF-endorsed measure and the specifications are harmonized. Building on this existing measure helps to reduce the burden of implementation for organizations and to align incentives for providers and organizations to focus on key quality of care issues. Note: The specifications for the existing measure (Controlling High Blood Pressure NQF #0018) have been updated based on 2013 JNC-8 guidelines. NCQA will submit the revised specification for Controlling High Blood Pressure NQF #0018 in the 4th quarter 2014 during	the current owner and steward of the existing NQF-endorsed measure and the specifications are harmonized. Building on this existing measure helps to reduce the burden of implementation for organizations and to align incentives for providers and organizations to focus on key quality of care issues. 5b.1 If competing, why superior or rationale for additive value: Not applicable.	# 0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg) # 0575: Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%) NCQA's composite is a different measure construct; it is calculated at the physician panel level (what percentage of my patients have an A1c < 8.0, what percentage had BP < 140/90) but is not a patient level composite. MNCM believes that its patient level all-or-none composite is superior, patient-centric (not provider centric) and individual patients achieving as many health targets as possible only increases their likelihood of reducing long term microvascular and macrovascular	#0073 Ischemic Vascular Disease (IVD): Blood Pressure Control are most closely related to the components of our measure, however this measure focuses on the inpatient setting and only patients discharged with acute myocardial infarction, coronary bypass graft or percutaneous coronary interventions. #0067 Chronic Stable Coronary Artery Disease: Antiplatelet Therapy focuses only on patients with coronary artery disease; however from specifications available through QPS not able to compare diagnosis code definitions. This measure, #0076 Optimal Vascular Care is more inclusive with

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	of patients 18-85 years of age with serious mental illness who had a diagnosis of hypertension and whose blood pressure was adequately controlled during the measurement year. Measure 2606 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with a serious mental illness and diabetes (type 1 and type 2) whose most recent blood pressure reading during the measurement year is <140/90	diabetes population. HARMONIZED MEASURE ELEMENTS: Measures 0061 and 0729 both focus on an adult patient population 18-75 years of age with diabetes (type 1 and type 2). Both measures assess whether the patient's most recent blood pressure level in the measurement period was <140/90 mm Hg. Both measures also specify denominator visit criteria to include patients with at least two outpatient visits in the last two years with a diagnosis of diabetes. UNHARMONIZED MEASURE	NQF's scheduled measure update period. This measure uses the new specification to be consistent with the current guideline. 5b.1 If competing, why superior or rationale for additive value: Not applicable.		complication of diabetes. These two measure's numerators are harmonized. We have philosophical differences in the denominator definitions and this is due in part to the data source. NCQA uses claims data to identify diabetic patients, MNCM used EMR based data. NCQA's methodology looks for diabetes diagnosis codes but additionally will include patients on oral medications and insulin who do not have the diagnosis. We also believe that is important to exclude diabetic women who are currently pregnant during the measurement year, related to cholesterol management. NCQA's denominator value sets	a denominator definition of ischemic vascular disease (atherosclerosis of coronary and peripheral arteries) #0543 Adherence to statin therapy for individuals with cardiovascular disease. This medication claims based measure's denominator is more aligned with our intent (coronary, cerebrovascular and peripheral artery disease), however endorsement was removed in 2015. 5b.1 If competing, why superior or rationale for additive value: There are other similar measures that address three of the four components separately, but no currently endorsed measure exists that is

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	mm Hg. Measure 0076 is NQF endorsed as a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult ischemic vascular disease patients, 18-75 years of age, who have optimally managed modifiable risk factors including blood pressure and three other indicators. Measure 0729 is NQF endorsed as a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult diabetes	ELEMENTS: - Data Source: Measure 0061 is collected through administrative claims and/or medical record. Measure 0729 is collected through medical record abstraction. - Level of Accountability: Measure 0061 is a health plan level measure and is used in NCQA's clinical quality and recognition programs (See 4.1 Usability and Use). Measure 0729 is a physician level measure. - Data Elements: Measure 0061 uses two methods to identify patients in the denominator 1) claims/encounter data with a			intentionally include these patients. This measure is related (but not exactly the same) 0545: Adherence to Statins for Individuals with Diabetes Mellitus (CMS) Uses the same denominator definition as the NCQA composite. From information available in QPS, it does not appear that there are exceptions to this measure related to liver disease, rhabdomyolysis, pregnancy, etc. This is different from our planned cholesterol component for statin use. We believe our cholesterol component is superior in that it takes into account patient safety. This measure is related (but not exactly the same)	a patient level all-or-none composite measure. # 0076 Optimal Vascular Care is superior to the newly submitted measure for consideration because its measure construct additionally includes: * contraindications and exceptions to statin use * risk adjustment; actual and expected rates reported * allowable exclusions for potentially frail older adults age 65 to 75 (hospice or palliative services, nursing home, death)

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	patients, 18-75 years of age, who have optimally managed modifiable risk factors including blood pressure and four other indicators. HARMONIZED MEASURE ELEMENTS: All measures described above focus on a blood pressure target of <140/90 mm Hg. UNHARMONIZED MEASURE ELEMENTS: - Data Source and Level of Accountability: Measures 0018, 0061, 2602, and 2606 are collected through administrative claims and/or	diagnosis of diabetes and 2) pharmacy data for insulin or hypoglycemic/anti hyperglycemics (see S.7 Denominator Details). Measure 0729 uses encounter data with a diagnosis for diabetes to identify patients in the denominator. NCQA uses two identification methods to ensure that only patients with diagnosed diabetes are included in the denominator. - Exclusions: Exclusions for measures 0061 and 0729 are substantially aligned with some variation due to differences in health plan and			2712: Statin Use in Persons with Diabetes (PQA) This measure uses a different data source; pharmacy claims. Because the data source relies on filled prescriptions, the only way to identify the denominator is if the patient is on a diabetes drug, which does not encompass all diabetic patients that should be on a statin. Exclusions for this measure do not take into account the exceptions and contraindications for use of statins. We believe our cholesterol component is superior.	

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	medical record review using health plan reported data. Measures 0076 and 0729 are collected through medical record abstraction and reported at the physician level of accountability. - Population Focus: Measure 0018 is focused on the general population of people with hypertension while the other measures focus on either diabetes, serious mental illness with diabetes, or serious mental illness with hypertension. - Age Range: Measures 0018	clinician level reporting. IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN: The differences between these measures do not have an impact on interpretability of publicly reported rates. There is no added burden of data collection because the data for each measure is collected from different data sources by different entities. 5b.1 If competing, why superior or rationale for additive value: N/A				

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	and 2602 focus on adults 18-85 while the other measures focus on adults 18-75. IMPACT ON INTERPRETABILITY?AND DATA COLLECTION BURDEN:? The differences between measures 0018, 0061, 2602, and 2606 do not have an impact on interpretability of?publicly?reported rates or an impact on data collection burden as the measures are focused on different populations. The differences between 0018, 0076, and 0729 also do not have an impact on					

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	interpretability of publicly reported rates or an impact on data collection burden because the data for each measure is collected from different data sources by different entities. 5b.1 If competing, why superior or rationale for additive value: NA					

Comparison of NQF 0071 and NQF 0070

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
Steward	National Committee for Quality Assurance	PCPI Foundation

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
Description	The percentage of patient's 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.	Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy
Type	Outcome: Intermediate Clinical Outcome	Process
Data Source	Claims This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system. No data collection instrument provided Attachment 0071_PBH_Value_Sets_Fall_2019-637091548789757231.xlsx	Registry Data Not applicable. No data collection instrument provided Attachment NQF0070_I9toI10_conversion-636904075196450947.xlsx
Level	Health Plan	Clinician : Group/Practice, Clinician : Individual
Setting	Outpatient Services	Home Care, Other, Outpatient Services, Post-Acute Care Nursing Facility Visit, Care Services in Long-Term Residential Facility
Numerator Statement	Patients who received at least 135 days of treatment with beta-blockers during the 180-day measurement interval.	Patients who were prescribed beta-blocker therapy
Numerator Details	At least 135 days of treatment with beta-blockers during the 180-day measurement interval. 180-day measurement interval – The 180-day period that includes the discharge date and the 179 days after discharge. To determine continuity of treatment during the 180-day period, identify all prescriptions filled within the 180-day measurement interval, and add the number of allowed gap days (up to a total of 45 days) to the number of treatment days for a maximum of 180 days (i.e., 135 treatment days + 45 gap days = 180 days). Treatment days (days covered) – The actual number of calendar days covered with prescriptions within the specified 180-day measurement interval (i.e., a prescription of a 90-day supply	Time Period for Data Collection: At least once during the measurement period Definition: Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list. Beta-blocker therapy: - For patients with prior LVEF <40%, beta-blocker therapy includes the following: bisoprolol, carvedilol, or sustained release metoprolol succinate. - For patients with prior MI, beta-blocker therapy includes any agent within the beta-blocker drug class. As of 2015, no

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	dispensed on the 100th day will have 80 days counted in the 180-day interval). Assess for active prescriptions and include days supply that fall within the 180-day measurement interval. For patients who were on beta-blockers prior to admission and those who were dispensed an ambulatory prescription during their inpatient stay, factor those prescriptions into adherence rates if the actual treatment days fall within the 180-day measurement interval. PBH-B BETA-BLOCKER MEDICATIONS DESCRIPTION / PRESCRIPTION Noncardioselective beta-blockers / Carvedilol; Labetalol; Nadolo; Penbutolol; Pindolol; Propranolol; Timolol; Sotalol Cardioselective beta-blockers / Acebutolol; Atenolol; Betaxolol; Bisoprolol; Metoprolol; Nebivolol Antihypertensive combinations / Atenolol-chlorthalidone; Bendroflumethiazide-nadolol; Bisoprolol-hydrochlorothiazide; Hydrochlorothiazide-metoprolol; Hydrochlorothiazide-propranolol See attached code value sets.	recommendations or evidence are cited in current stable ischemic heart disease guidelines for preferential use of specific agents. Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of CAD or history of cardiac surgery proxy is documented. For Submission Criteria 1, report Quality Data Code, G9189: Beta-blocker therapy prescribed or currently being taken For Submission Criteria 2, report CPT Category II Code, 4008F: Beta-blocker therapy prescribed or currently being taken
Denominator Statement	An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.	All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior (within the past 3 years) MI or a current or prior LVEF < 40%
Denominator Details	Patients who had continuous enrollment from discharge date through 179 days after discharge. No more than one gap in continuous enrollment of up to 45 days within the 180 days of the event. If the patient has Medicaid, then no more than a 1-month gap in coverage. An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.	Time Period for Data Collection: 12 consecutive months Denominator Note: The history of cardiac surgery serves as a proxy for a diagnosis of CAD; a diagnosis is not needed if the patient has documented history of cardiac surgery. Only one of the two criteria – a diagnosis of CAD or history of cardiac surgery proxy – is required. To meet the denominator criteria, a patient must have an active diagnosis of CAD (or proxy documented) at the time of the encounter which is used to qualify for the denominator and evaluate the numerator. The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. If a patient has more than one episode of AMI that meets the event/diagnosis criteria, from July 1 of the year prior to the measurement year through June 30 of the measurement year, include only the first discharge. Direct transfers to an acute inpatient care setting: If a patient had a direct transfer to an acute inpatient setting (for any diagnosis), use the discharge date from the transfer setting, not the initial discharge. Exclude both the initial discharge and the direct transfer discharge if the transfer discharge occurs after June 30 of the measurement year. Use the instructions below to identify direct transfers and exclude nonacute inpatient stays. Direct transfers to a nonacute inpatient care setting: Exclude from the denominator, hospitalizations in which the patient had a direct transfer to a nonacute inpatient care setting for any diagnosis. Use the instructions below to identify direct transfers and confirm the stay was for nonacute inpatient care based on the presence of a nonacute code on the claim. A direct transfer is when the discharge date from the first inpatient setting precedes the admission date to a second inpatient setting by one calendar day or less. For example: - An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 1, is a direct transfer. - An inpatient discharge on June 1, followed by an admission to an inpatient setting on June 2, is a direct transfer.	meets the CAD diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action. If the patient meets the proxy of a history of cardiac surgery inclusion criterion, there should be documentation of the proxy at the encounter being evaluated for the numerator action. Prior Myocardial Infarction (MI) – for Submission Criteria 2, prior MI is limited to those occurring within the past 3 years. Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%) Patients aged >= 18 years on date of encounter AND Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 OR History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996 AND Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 3, is not a direct transfer; these are two distinct inpatient stays. Use the following method to identify admissions to and discharges from inpatient settings. 1. Identify all acute and nonacute inpatient stays. 2. If needed, identify nonacute inpatient stays. 3. Identify the admission and discharge dates for the stay.	AND At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITH OR WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND Left ventricular ejection fraction (LVEF) < 40%: G8694 Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction Patients aged >= 18 years on date of encounter AND Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 OR History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996 AND Diagnosis for myocardial infarction– includes patient that had a prior (within the past 3 years) myocardial infarction (ICD-10-CM): I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.0, I22.1, I22.2, I22.8, I22.9, I24.1, I25.2

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
		AND Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITH OR WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02
Exclusions	Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria: - Asthma - COPD - Obstructive chronic bronchitis - Chronic respiratory conditions due to fumes and vapors - Hypotension, heart block >1 degree or sinus bradycardia - A medication dispensing event indicative of a history of asthma - Intolerance or allergy to beta-blocker therapy Additionally, this measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.	Denominator Exceptions: Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerance, other medical reasons). Documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons). Documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system).

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
Exclusion Details	Patients identified as having an intolerance or allergy to beta-blocker therapy. Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria: - Asthma - COPD - Obstructive chronic bronchitis - Chronic respiratory conditions due to fumes and vapors - Hypotension, heart block >1 degree or sinus bradycardia - A medication dispensing event indicative of a history of asthma MEDICATIONS TO IDENTIFY HISTORY OF ASTHMA DESCRIPTION / PRESCRIPTION Bronchodilator combinations / Budesonide-formoterol; Fluticasone-vilantero; Fluticasone-salmeterol; Formoterol-mometasone Inhaled corticosteroids / Beclomethasone; Budesonide; Ciclesonide; Flunisolide; Fluticasone; Mometasone Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the services began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data. Exclude adults who meet any of the following criteria: - Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following: -- Enrolled in an Institutional SNP (I-SNP) any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. -- Living long-term in an institution any time on or between July 1 of the year prior to the measurement year and the end of the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run date of the file to	Time Period for Data Collection: During the encounter within the 12-month period Exceptions are used to remove a patien t from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) (eg, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities. Additional details are as follows: For Submission Criteria 1 –

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	determine if an adult had an LTI flag any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. - Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Adults must meet BOTH of the following frailty and advanced illness criteria to be excluded: 1. At least one claim/encounter for frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. 2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years): -- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the discharge date for the stay. -- At least one acute inpatient encounter with an advanced illness diagnosis. -- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. -- A dispensed dementia medication. DEMENTIA MEDICATIONS DESCRIPTION / PRESCRIPTION	Report Quality Data Code, G9190: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons). Report Quality Data Code, G9191: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons). Report Quality Data Code, G9192: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system). For Submission Criteria 2 – Append a modifier to CPT Category II Code: 4008F-1P: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons). 4008F-2P: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons). 4008F-3P: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine Miscellaneous central nervous system agents / Memantine - Members 81 years of age and older as of December 31 of the measurement year (all product lines) with frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. See attached code value sets.	
Risk Adjustment	No risk adjustment or risk stratification 116000| 123834| 140881 116000| 123834| 140881	No risk adjustment or risk stratification 140560| 135810| 117446 140560| 135810| 117446
Stratification	No stratification	Consistent with CMS' Measures Management System Blueprint and national recommendations put forth by the IOM (now NASEM) and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	STEP 1: Determine the eligible population. To do so, identify patients who meet all specified criteria. - AGES: 18 years and older as of December 31 of the measurement year. - EVENT/DIAGNOSIS: Identify patients who were discharged from an acute setting with an AMI from July 1 of the year prior to the measurement year through June 30 of the measurement year. SEE S.6 and S.7 for eligible population and denominator criteria and details. STEP 2: Exclude patients who meet the exclusions criteria. SEE S.8 and S.9 for denominator exclusion criteria and details. STEP 3: Determine the number of patients in the eligible population who were given a 180-day course of treatment with beta blockers post discharge.	This measure is comprised of two submission criteria but is intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows: Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)] Calculation algorithm for Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%) 1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	STEP 4: Identify patients whose dispensed days' supply is >=135 days in the 180-day measurement interval. SEE S.4 and S.5 for numerator criteria and details. STEP 5: Calculate the rate by dividing the numerator (STEP 4) by the denominator (after exclusions) (STEP 2). 116000| 123834| 140881	defined criteria). Note: in some cases the initial population and denominator are identical. 3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (e.g., other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. Calculation algorithm for Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction 1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
		3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. 140560| 135810| 117446
Submission items	5.1 Identified measures: 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1	5.1 Identified measures: 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) 0117 : Beta Blockade at Discharge 0127 : Preoperative Beta Blockade 0071 : Persistence of Beta-Blocker Treatment After a Heart Attack 0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0083e : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2 NCQA's current Persistence of Beta Blocker Treatment After a Heart Attack measure (NQF measure 0071) uses health plan-reported data to assess the percentage of patients 18 years of age and older during the measurement year who were discharged with a diagnosis of AMI during the 6 months prior to the beginning of the measurement year through the 6 months after the beginning of the measurement year and who received persistent beta-blocker treatment for six months after discharge. RELATED NQF MEASURE 0070 (Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)): This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current left ventricular ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy. HARMONIZED MEASURE ELEMENTS: Measure 0071 and 0070 focus on patients 18 years and older who are prescribed beta-blocker treatment post-discharge after having a MI or history of MI. The National Quality Strategy Priorities classification for both measures is Prevention and Treatment of Cardiovascular Disease. Both measures exclude patients who are allergic or have an intolerance to beta blockers. DIFFERENCES: Below are the unharmonized measure elements between measure 0071 and measure 0070: Measure 0071 focuses on beta-blocker treatment post a MI and Measure 0070 focuses on patients who have a prior MI or a current or prior LVEF <40%. - Data Source: Data for measure 0071 is collected through administrative claims, electronic clinical data, and pharmacy data, while data for measure 0070 is collected through medical record,	5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0070 addresses a patient population of patients with CAD and either a recent prior MI or LVSD. This patient population is also covered in part by the following NQF-endorsed measures: NQF 0071: Persistence of Beta-Blocker Treatment After a Heart Attack and NQF 0083 and 0083e: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD). The specifications are harmonized to the extent possible. As a result, the denominator specifications for the measures differ where needed based on the differing patient populations. Additionally, NQF 0071 is intended for use at the health plan level. NQF 0117 is an inpatient/hospital level measure and includes only patients who have undergone isolated CABG surgery. NQF 0127 is also an inpatient/hospital level measure that focuses on administration of beta-blockers prior to isolated CABG surgery. Measure 0070e is the EHR version of this measure and is completely harmonized. 5b.1 If competing, why superior or rationale for additive value:

	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
	electronic health record data, electronic clinical data, and paper records - Level of Accountability: Measure 0071 is a health plan level measure while measure 0070 is a clinician-level measure. - Population: Measure 0071 focuses on patients who were diagnosed with a MI and discharged and prescribed a beta-blocker therapy treatment. Measure 0070 focuses on patients in a measurement year with a diagnosis of coronary artery diseases who also have a prior MI or current or prior LVEF. - Exclusions: The difference in exclusions is that measure 0071 specifies asthma, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes and vapors, hypotension, hear block >1 degree, sinus bradycardia, and medication dispensing events indicative of a history of asthma as exclusions. Additionally, measure 0071 excludes hospitalizations in which the patient was transferred directly to a nonacute care facility for any diagnosis, patients enrolled in an I-SNP, patients living long-term in an institution, patients 66-80 years of age with frailty and advanced illness, and patients 81 years of age and older with frailty. Measure 0070 exclusions include: documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons) and documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system). IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN: The differences between measures 0071 and 0070 do not have an impact on interpretability of publicly reported rates, or the burden of data collection, because all data for both measures are collected from different data sources by different entities. ANSWER FOR SECTION 5b.1 Our current measure has a long-standing history of use by health plans and has been implemented for nearly 15 years.	

Comparison of NQF 0965, NQF 0066, NQF 0070, NQF 0071, and NQF 0081

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
Steward	American College of Cardiology	American Heart Association/American Stroke Association	PCPI Foundation	National Committee for Quality Assurance	PCPI Foundation
Description	Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge.	Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have diabetes OR a current or prior Left Ventricular Ejection Fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB therapy	Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy	The percentage of patient's 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.	Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge
Type	Composite	Process	Process	Outcome: Intermediate Clinical Outcome	Process
Data Source	Registry Data National Cardiovascular Data Registry (NCDR) ICD Registry Available in attached appendix at A.1 Attachment icd_v2_codersdatadictiona	Registry Data This measure is currently being used in the ACCF PINNACLE registry for the outpatient office setting No data collection instrument provided Attachment	Registry Data Not applicable. No data collection instrument provided Attachment NQF0070_I9toI10_conversion-	Claims This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure	Registry Data Not applicable No data collection instrument provided Attachment NQF0081_I9toI10_conversion_2019Apr09.xlsx

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	ry_2-2-637061353934779116-637088191497113357.pdf	NQF0066__I9tol10_conversion-637065936225258259.xlsx	636904075196450947.xlsx	directly from health plans via NCQA's online data submission system. No data collection instrument provided Attachment 0071_PBH_Value_Sets_Fall_2019-637091548789757231.xlsx	
Level	Facility	Clinician : Group/Practice, Clinician : Individual	Clinician : Group/Practice, Clinician : Individual	Health Plan	Clinician : Group/Practice, Clinician : Individual
Setting	Inpatient/Hospital	Home Care, Outpatient Services, Post-Acute Care	Home Care, Other, Outpatient Services, Post-Acute Care Nursing Facility Visit, Care Services in Long-Term Residential Facility	Outpatient Services	Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility
Numerator Statement	Generator patients who receive all medications for which they are eligible: 1. ACE/ARB prescribed at discharge (if eligible for ACE/ARB as described in denominator) AND 2. Beta blockers prescribed at discharge (if	Patients who were prescribed ACE inhibitor or ARB therapy	Patients who were prescribed beta-blocker therapy	Patients who received at least 135 days of treatment with beta-blockers during the 180-day measurement interval.	Patients who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	eligible for beta blockers as described in denominator)				
Numerator Details	If eligible for ACE/ARB and given, then code "Yes" If eligible for ACE/ARB but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for ACE/ARB and not given, then code "No, no reason" If eligible for beta blocker and given, then code "Yes" If eligible for beta blocker but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for beta blocker and not given, then code "No, no reason" If any "No, no reason" present, then performance not met. Else, performance met.	Numerator Definition: Prescribed – May include prescription given to the patient for ACE inhibitor or ARB therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB therapy as documented in current medication list. FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40% Report Quality Data Code G8935: Clinician prescribed angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy FOR POPULATION 2: Patients who are 18 years	Time Period for Data Collection: At least once during the measurement period Definition: Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list. Beta-blocker therapy: - For patients with prior LVEF <40%, beta-blocker therapy includes the following: bisoprolol, carvedilol, or sustained release metoprolol succinate. - For patients with prior MI, beta-blocker therapy	At least 135 days of treatment with beta-blockers during the 180-day measurement interval. 180-day measurement interval – The 180-day period that includes the discharge date and the 179 days after discharge. To determine continuity of treatment during the 180-day period, identify all prescriptions filled within the 180-day measurement interval, and add the number of allowed gap days (up to a total of 45 days) to the number of treatment days for a maximum of 180 days (i.e., 135 treatment days + 45 gap days = 180 days). Treatment days (days covered) – The actual number of calendar days	Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge Definition: Prescribed-Outpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB or ARNI therapy as documented in current medication list. Prescribed-Inpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at discharge OR ACE inhibitor or ARB or ARNI therapy to be continued after discharge as documented in the discharge medication list. Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	Note: Contraindicated and those participating in blinded studies are considered performance met. There are technically no exclusions or exceptions that would remove patients from the denominator.	and older with a diagnosis of CAD who have diabetes Report Quality Data Code G8473: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy prescribed Note: For reporting, the two populations are combined for a single reported performance score on the combined measure population. If a patient has both diabetes and LVSD, reporting criteria #2 (CAD with diabetes) will count as appropriate reporting for this patient.	includes any agent within the beta-blocker drug class. As of 2015, no recommendations or evidence are cited in current stable ischemic heart disease guidelines for preferential use of specific agents. Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of CAD or history of cardiac surgery proxy is documented. For Submission Criteria 1, report Quality Data Code, G9189: Beta-blocker therapy prescribed or currently being taken For Submission Criteria 2, report CPT Category II Code, 4008F: Beta-blocker therapy	covered with prescriptions within the specified 180-day measurement interval (i.e., a prescription of a 90-day supply dispensed on the 100th day will have 80 days counted in the 180-day interval). Assess for active prescriptions and include days supply that fall within the 180-day measurement interval. For patients who were on beta-blockers prior to admission and those who were dispensed an ambulatory prescription during their inpatient stay, factor those prescriptions into adherence rates if the actual treatment days fall within the 180-day measurement interval. PBH-B BETA-BLOCKER MEDICATIONS DESCRIPTION / PRESCRIPTION	the active diagnosis of heart failure is documented. Eligible clinicians who have given a prescription for or whose patient is already taking an Angiotensin-Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor Blocker (ARB) would meet performance for this measure. Other combination therapies that consist of an ACEI plus diuretic, ARB + neprilysin inhibitor (ARNI), ARB plus diuretic, ACEI plus calcium channel blocker, ARB plus calcium channel blocker, or ARB plus calcium channel blocker plus diuretic would also meet performance for this measure. For Submission Criteria 1 and Submission Criteria 2, report CPT Category II Code, 4010F: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy prescribed or currently being taken (NOTE to NQF: Based on the language revision, PCPI is requesting updated coding and descriptor.)

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
			prescribed or currently being taken	Noncardioselective beta-blockers / Carvedilol; Labetalol; Nadolo; Penbutolol; Pindolol; Propranolol; Timolol; Sotalol Cardioselective beta-blockers / Acebutolol; Atenolol; Betaxolol; Bisoprolol; Metoprolol; Nebivolol Antihypertensive combinations / Atenolol-chlorthalidone; Bendroflumethiazide-nadolol; Bisoprolol-hydrochlorothiazide; Hydrochlorothiazide-metoprolol; Hydrochlorothiazide-propranolol See attached code value sets.	
Denominator Statement	All generator patients surviving hospitalization who are eligible to receive either an ACE/ARB or beta blocker at discharge.	All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have	All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior	An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute	All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40%

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		diabetes OR current or prior LVEF <40%	(within the past 3 years) MI or a current or prior LVEF < 40%	myocardial infarction (AMI) on the discharge claim.	
Denominator Details	All generator patients surviving hospitalization who are eligible to receive any one of the two medication classes: 1) ACE/ARB: Patients who have an ejection fraction (EF) of <40% OR 2) Beta blockers: Patients have either: a. EF of <40% AND/OR b. Previous myocardial infarction (MI)	FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40% Denominator Definition: LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction. Patients aged >= 18 years AND Diagnosis for coronary artery disease (ICD-9-CM) [reportable through 9/30/2015]: 410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90,	Time Period for Data Collection: 12 consecutive months Denominator Note: The history of cardiac surgery serves as a proxy for a diagnosis of CAD; a diagnosis is not needed if the patient has documented history of cardiac surgery. Only one of the two criteria – a diagnosis of CAD or history of cardiac surgery proxy – is required. To meet the denominator criteria, a patient must have an active diagnosis of CAD (or proxy documented) at the time of the encounter which is used to qualify for the denominator and evaluate the numerator.	Patients who had continuous enrollment from discharge date through 179 days after discharge. No more than one gap in continuous enrollment of up to 45 days within the 180 days of the event. If the patient has Medicaid, then no more than a 1-month gap in coverage. An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim. To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays.	Time Period for Data Collection: 12 consecutive months Denominator Note: LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction. The LVSD may be determined by quantitative or qualitative assessment, which may be current or historical. Examples of a quantitative or qualitative assessment may include an echocardiogram: 1) that provides a numerical value of LVSD or 2) that uses descriptive terms such as moderately or severely depressed left ventricular systolic function. Any current or prior ejection fraction study documenting LVSD can be used to identify patients. To meet the denominator criteria, a patient must have an active diagnosis of heart failure at the time of the encounter which is used to qualify for the denominator and evaluate the numerator.

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		410.91, 410.92, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.1, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.8, 414.9, V45.81, V45.82 Diagnosis for coronary artery disease (ICD-10-CM) [reportable beginning 10/01/2015]: I20.0, I20.1, I20.8, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I22.0, I22.1, I22.2, I22.8, I22.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799,	The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient meets the CAD diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action. If the patient meets the proxy of a history of cardiac surgery inclusion criterion, there should be documentation of the proxy at the encounter being evaluated for the numerator action. Prior Myocardial Infarction (MI) – for Submission Criteria 2, prior MI is limited to those occurring within the past 3 years. Submission Criteria 1: Patients with left	2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. If a patient has more than one episode of AMI that meets the event/diagnosis criteria, from July 1 of the year prior to the measurement year through June 30 of the measurement year, include only the first discharge. Direct transfers to an acute inpatient care setting: If a patient had a direct transfer to an acute inpatient setting (for any diagnosis), use the discharge date from the transfer setting, not the initial discharge. Exclude both the initial discharge and the direct transfer discharge if the transfer discharge occurs after June 30 of the measurement	The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient meets the heart failure diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action. Submission Criteria 1: Patients who were prescribed ACE inhibitor or ARB therapy within a 12-month period when seen in the outpatient setting Patients aged >= 18 years on date of encounter AND Diagnosis for heart failure (ICD-10-CM): I11.0, I13.0, I13.2, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.814, I50.82, I50.83, I50.84, I50.89, I50.9 AND Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306,

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 AND Patient encounter during the reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 AND Two Denominator Eligible Visits AND Report Quality Data Code: G8934: Left Ventricular Ejection Fraction (LVEF) < 40% or documentation of	ventricular systolic dysfunction (LVEF <40%) Patients aged >= 18 years on date of encounter AND Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 OR History of cardiac surgery (CPT): 33140, 33510,	year. Use the instructions below to identify direct transfers and exclude nonacute inpatient stays. Direct transfers to a nonacute inpatient care setting: Exclude from the denominator, hospitalizations in which the patient had a direct transfer to a nonacute inpatient care setting for any diagnosis. Use the instructions below to identify direct transfers and confirm the stay was for nonacute inpatient care based on the presence of a nonacute code on the claim. A direct transfer is when the discharge date from the first inpatient setting precedes the admission date to a second inpatient setting by one calendar day or less. For example:	99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITH OR WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND Left ventricular ejection fraction (LVEF) less than 40% or documentation of moderately or severely depressed left ventricular systolic function: 3021F

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		moderately or severely depressed left ventricular systolic function FOR POPULATION 2: Patients who are 18 years and older with a diagnosis of CAD who have diabetes Patients aged >= 18 years AND Diagnosis for coronary artery disease (ICD-9-CM) [reportable through 9/30/2015]: 410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.1, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2,	33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996 AND Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITHOUT	- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 1, is a direct transfer. - An inpatient discharge on June 1, followed by an admission to an inpatient setting on June 2, is a direct transfer. - An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 3, is not a direct transfer; these are two distinct inpatient stays. Use the following method to identify admissions to and discharges from inpatient settings. 1. Identify all acute and nonacute inpatient stays. 2. If needed, identify nonacute inpatient stays.	Submission Criteria 2: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy at each hospital discharge Patients aged >= 18 years on date of encounter AND Diagnosis for heart failure (ICD-10-CM): I11.0, I13.0, I13.2, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I I50.814, I50.82, I50.83, I50.84, I50.89, I50.9 AND Patient encounter during performance period (CPT): 99238, 99239 AND Left ventricular ejection fraction (LVEF) less than 40% or documentation of moderately or severely depressed left ventricular systolic function: 3021F

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		414.3, 414.8, 414.9, V45.81, V45.82 Diagnosis for coronary artery disease (ICD-10-CM) [reportable beginning 10/01/2015]: I20.0, I20.1, I20.8, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I22.0, I22.1, I22.2, I22.8, I22.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 AND Diagnosis for diabetes (ICD-9-CM) [reportable	Telehealth Modifier: GQ, GT, 95, POS 02 AND At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITH OR WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND Left ventricular ejection fraction (LVEF) < 40%: G8694	3. Identify the admission and discharge dates for the stay.	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		through 9/30/2015]: 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93 Diagnosis for diabetes (ICD-10-CM) [reportable beginning 10/01/2015]: E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E10.36, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618,	Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction Patients aged >= 18 years on date of encounter AND Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61 OR		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351, E13.359, E13.36, E13.39, E13.40, E13.41,	History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996 AND Diagnosis for myocardial infarction– includes patient that had a prior (within the past 3 years) myocardial infarction (ICD-10-CM): I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.0, I22.1, I22.2, I22.8, I22.9, I24.1, I25.2 AND Patient encounter during performance period – to be used for numerator		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9 AND Patient encounter during the reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 AND Two Denominator Eligible Visits	evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02 AND At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309,		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		Note: For reporting, the two populations are combined for a single reported performance score on the combined measure population. If a patient has both diabetes and LVSD, reporting criteria #2 (CAD with diabetes) will count as appropriate reporting for this patient.	99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350 WITH OR WITHOUT Telehealth Modifier: GQ, GT, 95, POS 02		
Exclusions	None	Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons) Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons)	Denominator Exceptions: Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerance, other medical reasons). Documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons). Documentation of system reason(s) for not prescribing beta-blocker	Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria: - Asthma - COPD - Obstructive chronic bronchitis - Chronic respiratory conditions due to fumes and vapors - Hypotension, heart block >1 degree or sinus bradycardia	Denominator Exceptions: Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons). Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., patient declined, other patient reasons). Documentation of system reason(s) for not prescribing ACE inhibitor or

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		Documentation of system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care system)	therapy (e.g., other reasons attributable to the health care system).	- A medication dispensing event indicative of a history of asthma - Intolerance or allergy to beta-blocker therapy Additionally, this measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.	ARB or ARNI therapy (e.g., other system reasons).
Exclusion Details	N/A	Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not	Time Period for Data Collection: During the encounter within the 12-month period Exceptions are used to remove a patien t from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific	Patients identified as having an intolerance or allergy to beta-blocker therapy. Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria: - Asthma - COPD - Obstructive chronic bronchitis	Time Period for Data Collection: During the encounter within the 12-month period Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The ACC/AHA/PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure #0066: Coronary	reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are	- Chronic respiratory conditions due to fumes and vapors - Hypotension, heart block >1 degree or sinus bradycardia - A medication dispensing event indicative of a history of asthma MEDICATIONS TO IDENTIFY HISTORY OF ASTHMA DESCRIPTION / PRESCRIPTION Bronchodilator combinations / Budesonide-formoterol; Fluticasone-vilantero; Fluticasone-salmeterol; Formoterol-mometasone Inhaled corticosteroids / Beclomethasone; Budesonide; Ciclesonide; Flunisolide; Fluticasone; Mometasone Exclude patients who use hospice services or elect to use a hospice benefit any time during the	characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD), exceptions may include medical reason(s) (eg, hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy-Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons), patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care	intended to serve as a guide to clinicians. For measure Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) (eg, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific	measurement year, regardless of when the services began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data. Exclude adults who meet any of the following criteria: - Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following: -- Enrolled in an Institutional SNP (I-SNP) any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. -- Living long-term in an institution any time on or between July 1 of the year prior to the measurement year and the end of the	reason(s) for not prescribing an ACE inhibitor or ARB or ARNI therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit- readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. Append a modifier to CPT Category II Code: 4010F-1P: Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons) 4010F-2P: Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g.,

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		system).Although this methodology does not require the external reporting of more detailed exception data, the ACC/AHA/PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The ACC/AHA/PCPI also advocates for the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. Additional details are as follows: FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40%	reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities. Additional details are as follows: For Submission Criteria 1 – Report Quality Data Code, G9190: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons). Report Quality Data Code, G9191: Documentation of patient reason(s) for not	measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run date of the file to determine if an adult had an LTI flag any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. - Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Adults must meet BOTH of the following frailty and advanced illness criteria to be excluded: 1. At least one claim/encounter for frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year. 2. Any of the following during the measurement	patient declined, other patient reasons) 4010F-3P: Documentation of system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., other system reasons)

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		Report Quality Data Code G8936: Clinician documented that patient was not an eligible candidate for angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy (e.g., allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons) or (e.g., patient declined, other patient reasons) or (e.g., lack of drug availability, other reasons attributable to the health care system) FOR POPULATION 2: Patients who are 18 years and older with a diagnosis of CAD who have diabetes Report Quality Data Code G8474: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB)	prescribing beta-blocker therapy (eg, patient declined, other patient reasons). Report Quality Data Code, G9192: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system). For Submission Criteria 2 – Append a modifier to CPT Category II Code: 4008F-1P: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons). 4008F-2P: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient	year or the year prior to the measurement year (count services that occur over both years): -- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim. 3. Identify the discharge date for the stay. -- At least one acute inpatient encounter with an advanced illness diagnosis.	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		therapy not prescribed for reasons documented by the clinician (e.g., allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons) or (e.g., patient declined, other patient reasons) or (e.g., lack of drug availability, other reasons attributable to the health care system)	declined, other patient reasons). 4008F-3P: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).	-- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge: 1. Identify all acute and nonacute inpatient stays. 2. Exclude nonacute inpatient stays. 3. Identify the discharge date for the stay. -- A dispensed dementia medication. DEMENTIA MEDICATIONS DESCRIPTION / PRESCRIPTION Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine Miscellaneous central nervous system agents / Memantine - Members 81 years of age and older as of December 31 of the measurement year (all product lines) with frailty any time on or between July 1 of the year	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
				prior to the measurement year and the end of the measurement year. See attached code value sets.	
Risk Adjustment	No risk adjustment or risk stratification	No risk adjustment or risk stratification	No risk adjustment or risk stratification	No risk adjustment or risk stratification	No risk adjustment or risk stratification
Stratification	N/A	Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.	Consistent with CMS' Measures Management System Blueprint and national recommendations put forth by the IOM (now NASEM) and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.	No stratification	Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	1) Check if given patient survived hospitalization and is	To calculate performance rates:	This measure is comprised of two submission criteria but is	STEP 1: Determine the eligible population. To do	S.12. Type of score: Rate/proportion

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	eligible for 1 of the 2 medication therapies. 2) If eligible for at least 1 medication, then keep this patient. 3) If not eligible for any of the 2 medications, then patient is removed from eligibility. If eligible for ACE/ARB and given, then code "Yes" If eligible for ACE/ARB and not given, then code "No, no reason" If eligible for ACE/ARB but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for Beta Blocker and given, then code then "Yes" If eligible for Beta Blocker and not given, then code "No, no reason" If eligible for Beta Blocker but contraindicated, then code "No – medical	1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical. 3. From the patients within the denominator, find the patients who meet the numerator criteria (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate	intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows: Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)] Calculation algorithm for Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%) 1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance	so, identify patients who meet all specified criteria. - AGES: 18 years and older as of December 31 of the measurement year. - EVENT/DIAGNOSIS: Identify patients who were discharged from an acute setting with an AMI from July 1 of the year prior to the measurement year through June 30 of the measurement year. SEE S.6 and S.7 for eligible population and denominator criteria and details. STEP 2: Exclude patients who meet the exclusions criteria. SEE S.8 and S.9 for denominator exclusion criteria and details. STEP 3: Determine the number of patients in the eligible population who were given a 180-day course	If other: S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score) Better quality = Higher score S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.) This measure is comprised of two submission criteria but is intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows:

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	reason" or "No – patient reason" 4) If any "No, no reason" present, then performance not met. Else, performance met. Although ineligible cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. Missing data defaults to "performance not met" This measure assumes that missing	that the number of patients in the numerator is less than or equal to the number of patients in the denominator 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons), patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons), or	measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical. 3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of	of treatment with beta blockers post discharge. STEP 4: Identify patients whose dispensed days' supply is >=135 days in the 180-day measurement interval. SEE S.4 and S.5 for numerator criteria and details. STEP 5: Calculate the rate by dividing the numerator (STEP 4) by the denominator (after exclusions) (STEP 2).	Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)] Calculation algorithm for Submission Criteria 1: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy within a 12-month period when seen in the outpatient setting 1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical. 3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	documentation on the process results in a failure of meeting an evidence based therapy.	system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care system)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case	patients in the denominator 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (e.g., other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation.		group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator. 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g ., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		represents a quality failure. 140560| 107246	--Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. Calculation algorithm for Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction 1. Find the patients who meet the initial population (ie, the general group of patients		exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. Calculation algorithm for Submission Criteria 2: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy at each hospital discharge 1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
			that a set of performance measures is designed to address). 2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical. 3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or		3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator. 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
			equal to the number of patients in the denominator 4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for		cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
			performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. 140560| 135810| 117446		
Submission items	5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy -	5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior	5.1 Identified measures: 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	5.1 Identified measures: 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%) 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) 0236 : Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery 0594 : Post MI: ACE inhibitor or ARB therapy	Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0074 : Chronic Stable Coronary Artery Disease: Lipid Control 0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 1522 : ACE/ARB Therapy at Discharge for ICD implant patients with Left Ventricular Systolic Dysfunction 1662 : Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy 2467 : Adherence to ACEIs/ARBs for Individuals with Diabetes Mellitus	0117 : Beta Blockade at Discharge 0127 : Preoperative Beta Blockade 0071 : Persistence of Beta-Blocker Treatment After a Heart Attack 0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0083e : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0070	5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1 5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2 NCQA's current Persistence of Beta Blocker Treatment After a Heart Attack measure (NQF measure 0071) uses health plan-reported data to assess the percentage of patients 18 years of age and older during the measurement year who were discharged with a diagnosis of AMI	1662 : Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy 0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: NQF 1662 is specific to patients with a diagnosis of chronic kidney disease who also have proteinuria. NQF 0066 is specific to patients with coronary artery disease who also have diabetes OR a current/prior LVEF of <40%. In both measures, the population of focus (ie, the denominator) is different. NQF 0081e is the eCQM version of this measure.

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	0117 : Beta Blockade at Discharge 0071 : Persistence of Beta-Blocker Treatment After a Heart Attack 0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale,	5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: While this measure's specifications are harmonized with existing measures where possible, there are several key differences between this measure and other existing related measures. The first group of related measures (NQF #1662, 1522, 0081, 2467)all have a similar focus on the prescription of ACEI/ARBs. However they all have different target populations, with measure #1662 focusing on patients with chronic kidney disease (CKD), measure #1522 being a facility-level measure focusing on patients with an ICD implant, measure	addresses a patient population of patients with CAD and either a recent prior MI or LVSD. This patient population is also covered in part by the following NQF-endorsed measures: NQF 0071: Persistence of Beta-Blocker Treatment After a Heart Attack and NQF 0083 and 0083e: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD). The specifications are harmonized to the extent possible. As a result, the denominator specifications for the measures differ where needed based on the differing patient populations. Additionally, NQF 0071 is intended for use at the health plan level. NQF 0117 is an	during the 6 months prior to the beginning of the measurement year through the 6 months after the beginning of the measurement year and who received persistent beta-blocker treatment for six months after discharge. RELATED NQF MEASURE 0070 (Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)): This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current left ventricular ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy. HARMONIZED MEASURE ELEMENTS:	5b.1 If competing, why superior or rationale for additive value:

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
	impact: Measure #0965 is a subset of other measures and the measures are completely harmonized with the exception of one area. It appears that only one measure (#81e) currently includes prescribing of ARNI as an acceptable therapy in the numerator. We assume that the other measures be updated to reflect the current evidence and there is no need for further harmonization. 5b.1 If competing, why superior or rationale for additive value: N/A	#0081 focusing on patients with a diagnosis of heart failure and left ventricular ejection fraction <40%, and measure #2467 focusing on medication adherence among patients with diabetes. This group of measures reflect the importance of ACEI/ARBs among a variety of patient populations, that are distinct from the patient population included in this measure. We believe that the measures are complementary rather than competing, and differences in the measure specifications are a result of the differences in the target patient population. These differences should not result in any additional data collection burden. The second group of related measures (NQF	inpatient/hospital level measure and includes only patients who have undergone isolated CABG surgery. NQF 0127 is also an inpatient/hospital level measure that focuses on administration of beta-blockers prior to isolated CABG surgery. Measure 0070e is the EHR version of this measure and is completely harmonized. 5b.1 If competing, why superior or rationale for additive value:	Measure 0071 and 0070 focus on patients 18 years and older who are prescribed beta-blocker treatment post-discharge after having a MI or history of MI. The National Quality Strategy Priorities classification for both measures is Prevention and Treatment of Cardiovascular Disease. Both measures exclude patients who are allergic or have an intolerance to beta blockers. DIFFERENCES: Below are the unharmonized measure elements between measure 0071 and measure 0070: Measure 0071 focuses on beta-blocker treatment post a MI and Measure 0070 focuses on patients who have a prior MI or a current or prior LVEF <40%. - Data Source: Data for measure 0071 is collected	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		#0067, 0074, and 0070) all focus on different aspects of care for patients with CAD. Measure #0067 focuses on use of antiplatelet therapy, while measure #0074 focuses on LDL control, and measure #0070 focuses on the use of beta-blocker therapy. We view these measures as complementary measures that, when taken together, provide a rounded view of the quality of care for patients with CAD. While these measures share a focus on the patient population with CAD, differences in measure specifications are reflective of the different care processes being targeted in each measure. We don't believe that these differences result in any additional data collection burden.		through administrative claims, electronic clinical data, and pharmacy data, while data for measure 0070 is collected through medical record, electronic health record data, electronic clinical data, and paper records - Level of Accountability: Measure 0071 is a health plan level measure while measure 0070 is a clinician-level measure. - Population: Measure 0071 focuses on patients who were diagnosed with a MI and discharged and prescribed a beta-blocker therapy treatment. Measure 0070 focuses on patients in a measurement year with a diagnosis of coronary artery diseases who also have a prior MI or current or prior LVEF. - Exclusions: The difference in exclusions is that measure 0071 specifies asthma,	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
		5b.1 If competing, why superior or rationale for additive value: This measure addresses a distinct target population and/or quality action from other related measures, as described above. The measures are complementary to form a well-rounded view of the quality of care for patients with CAD.		COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes and vapors, hypotension, hear block >1 degree, sinus bradycardia, and medication dispensing events indicative of a history of asthma as exclusions. Additionally, measure 0071 excludes hospitalizations in which the patient was transferred directly to a nonacute care facility for any diagnosis, patients enrolled in an I-SNP, patients living long-term in an institution, patients 66-80 years of age with frailty and advanced illness, and patients 81 years of age and older with frailty. Measure 0070 exclusions include: documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons) and documentation of system	

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)	0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	0071: Persistence of Beta-Blocker Treatment After a Heart Attack	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
				reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system). IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN: The differences between measures 0071 and 0070 do not have an impact on interpretability of publicly reported rates, or the burden of data collection, because all data for both measures are collected from different data sources by different entities. ANSWER FOR SECTION 5b.1 Our current measure has a long-standing history of use by health plans and has been implemented for nearly 15 years.	

Comparison of NQF 0965, NQF 0081, NQF 0083, NQF 0117, and NQF 0236

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
Steward	American College of Cardiology	PCPI Foundation	PCPI Foundation	The Society of Thoracic Surgeons	Centers for Medicare & Medicaid Services
Description	Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge.	Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge	Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed beta-blocker therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge	Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on beta blockers	Percentage of isolated Coronary Artery Bypass Graft (CABG) surgeries for patients aged 18 years and older who received a beta-blocker within 24 hours prior to surgical incision
Type	Composite	Process	Process	Process	Process
Data Source	Registry Data National Cardiovascular Data Registry (NCDR) ICD Registry Available in attached appendix at A.1	Electronic Health Records Not applicable	Registry Data Not applicable		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	Attachment icd_v2_codersdatadictionary_2-2-637061353934779116-637088191497113357.pdf				
Level	Facility	No data collection instrument provided Attachment 0081e_HF_ACE_ARB_ARNI_ValueSets_20190409.xlsx	No data collection instrument provided Attachment NQF0083_I9toI10_conversion_2019Apr09.xlsx	Registry Data STS Adult Cardiac Surgery Database Version 2.81	
Setting	Inpatient/Hospital	Clinician : Group/Practice, Clinician : Individual	Available at measure-specific web page URL identified in S.1 No data dictionary	Registry Data The source is the medical record, which provides patient information for the encounter. Medicare Part B claims and registry data is provided for test purposes.	
Numerator Statement	Generator patients who receive all medications for which they are eligible: 1. ACE/ARB prescribed at discharge (if	Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility	No data collection instrument provided Attachment NQF_0236_DataDic-636800391751711336-636832311904869870.xlsx		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	eligible for ACE/ARB as described in denominator) AND 2. Beta blockers prescribed at discharge (if eligible for beta blockers as described in denominator)				
Numerator Details	If eligible for ACE/ARB and given, then code "Yes" If eligible for ACE/ARB but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for ACE/ARB and not given, then code "No, no reason" If eligible for beta blocker and given, then code "Yes" If eligible for beta blocker but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for beta blocker and not given, then code "No, no reason" If any "No, no reason" present, then performance	Patients who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge	Clinician : Group/Practice, Clinician : Individual	Facility, Clinician : Group/Practice	Clinician : Group/Practice, Clinician : Individual

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	not met. Else, performance met. Note: Contraindicated and those participating in blinded studies are considered performance met. There are technically no exclusions or exceptions that would remove patients from the denominator.				
Denominator Statement	All generator patients surviving hospitalization who are eligible to receive either an ACE/ARB or beta blocker at discharge.	Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge	Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility	Inpatient/Hospital	Outpatient Services
Denominator Details	All generator patients surviving hospitalization who are eligible to receive any one of the two medication classes: 1) ACE/ARB: Patients who have an ejection fraction (EF) of <40% OR 2) Beta blockers: Patients have either:	Definition:	Patients who were prescribed beta-blocker therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge	Number of patients undergoing isolated CABG who were discharged on beta blockers	Patients who received a beta-blocker within 24 hours prior to surgical incision of isolated CABG surgeries

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	a. EF of <40% AND/OR b. Previous myocardial infarction (MI)				
Exclusions	None	Prescribed-Outpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB or ARNI therapy as documented in current medication list.	Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge		
Exclusion Details	N/A	Prescribed-Inpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at discharge OR ACE inhibitor or ARB or ARNI therapy to be continued after discharge as documented in the discharge medication list.	Definition:		
Risk Adjustment	No risk adjustment or risk stratification	at discharge OR ACE inhibitor or ARB therapy to be continued after discharge as documented in the discharge medication list.	Prescribed-Outpatient setting: prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list.		
Stratification	N/A	Guidance:	Prescribed-Inpatient setting: prescription given to the patient for beta-blocker therapy at discharge OR beta-blocker therapy to be continued		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
			after discharge as documented in the discharge medication list.		
Type Score	Rate/proportion better quality = higher score	Eligible clinicians who have given a prescription for or whose patient is already taking an Angiotensin-Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor Blocker (ARB) would meet performance for this measure. Other combination therapies that consist of an ACEI plus diuretic, ARB + neprilysin inhibitor (ARNI), ARB plus diuretic, ACEI plus calcium channel blocker, ARB plus calcium channel blocker, or ARB plus calcium channel blocker plus diuretic would also meet performance for this measure.	Beta-blocker therapy: For patients with prior LVEF < 40%, beta-blocker therapy should include bisoprolol, carvedilol, or sustained release metoprolol succinate.		
Algorithm	1) Check if given patient survived hospitalization and is eligible for 1 of the 2 medication therapies. 2) If eligible for at least 1 medication, then keep this patient. 3) If not eligible for any of the 2 medications, then patient is removed from eligibility. If eligible for ACE/ARB and given, then code "Yes"	HQMF eCQM developed and is attached to this submission in fields S.2a and S.2b.	Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of heart failure is documented.		

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	If eligible for ACE/ARB and not given, then code "No, no reason" If eligible for ACE/ARB but contraindicated, then code "No – medical reason" or "No – patient reason" If eligible for Beta Blocker and given, then code then "Yes" If eligible for Beta Blocker and not given, then code "No, no reason" If eligible for Beta Blocker but contraindicated, then code "No – medical reason" or "No – patient reason" 4) If any "No, no reason" present, then performance not met. Else, performance met. Although ineligible cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be				

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. Missing data defaults to "performance not met" This measure assumes that missing documentation on the process results in a failure of meeting an evidence based therapy.				
Submission items	5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%) 0070 : Coronary Artery Disease (CAD): Beta-Blocker	All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40%	For Submission Criteria 1 and Submission Criteria 2, report Quality Data Code, G8450: Beta-blocker therapy prescribed	Number of isolated CABG procedures in which discharge beta blockers [DCBeta (STS Adult Cardiac Surgery Database Version 2.81)] is marked "yes"	Numerator Options:

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) 0236 : Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery 0594 : Post MI: ACE inhibitor or ARB therapy 0117 : Beta Blockade at Discharge 0071 : Persistence of Beta-Blocker Treatment After a Heart Attack				

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) 0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: Measure #0965 is a subset of other measures and the measures are completely harmonized with the exception of one area. It appears that only				

	0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients	0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0117: Beta Blockade at Discharge	0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
	one measure (#81e) currently includes prescribing of ARNI as an acceptable therapy in the numerator. We assume that the other measures be updated to reflect the current evidence and there is no need for further harmonization. 5b.1 If competing, why superior or rationale for additive value: N/A				

Comparison of NQF 3534 and NQF 2561

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
Steward	American College of Cardiology	The Society of Thoracic Surgeons
Description	This measure estimates hospital risk standardized odds ratio for death from all causes within 30 days following transcatheter aortic valve replacement. The measure uses clinical data available in the STS/ACC TVT Registry for risk adjustment. For the purpose of development and testing,	STS AVR Composite Score comprises two domains consisting of six measures: Domain 1) Absence of Operative Mortality – Proportion of patients (risk-adjusted) who do not experience operative mortality. Operative mortality is defined as death during the same hospitalization as surgery or after discharge but within 30 days of the procedure; and Domain 2) Absence of Major Morbidity – Proportion of patients (risk-adjusted) who do not

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	the measure used site-reported 30-day follow-up data contained in the STS/ACC TVT Registry.	experience any major morbidity. Major morbidity is defined as having at least one of the following adverse outcomes: 1. reoperations for any cardiac reason, 2. renal failure, 3. deep sternal wound infection, 4. prolonged ventilation/intubation, and 5. cerebrovascular accident/permanent stroke. All measures are based on audited clinical data collected in a prospective registry and are risk-adjusted. Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score was created by "rolling up" the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance). Star ratings are publicly reported on the STS website and are also currently reported on the Consumer Reports website.
Type	Outcome	Composite
Data Source	Registry Data STS/ACC TVT Registry Available at measure-specific web page URL identified in S.1 Attachment TAVR_S.2b_attachment-637092425369121221.xlsx	Registry Data STS Adult Cardiac Surgery Database Version 2.81 (effective July 1, 2014); Version 2.9 (effective July 1, 2017) Available at measure-specific web page URL identified in S.1 Attachment S.2b._-_S.15._Detailed_Risk_Model_Specifications.STS_AVR_Composite_Score.docx
Level	Facility	Facility, Clinician : Group/Practice
Setting	Inpatient/Hospital	Inpatient/Hospital
Numerator Statement	The outcome of this measure is all-cause death within 30 days following a transcatheter aortic valve replacement (TAVR).	Due to the complex methodology used to construct the composite measure, it is impractical to separately discuss the numerator and denominator. The following discussion describes how each domain score is calculated and how these are combined into an overall composite score. The STS AVR Composite Score comprises two domains consisting of six individual measures: 1. Absence of Operative Mortality NQF # 0120 Risk-Adjusted Operative Mortality for AVR 2. Absence of Major Morbidity, scored any-or-none. The measures used are the same morbidity outcomes included in NQF #0696 STS CABG Composite Score.

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
		Risk-Adjusted Postoperative Stroke/Cerebrovascular Accident Risk-Adjusted Postoperative Surgical Re-exploration Risk-Adjusted Postoperative Deep Sternal Wound Infection Rate Risk-Adjusted Postoperative Renal Failure Risk-Adjusted Postoperative Prolonged Intubation (Ventilation) Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score is created by "rolling up" the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance). Patient Population: The analysis population consists of adult patients aged 18 years or older who undergo isolated AVR surgery Time Period: 3 years Data Completeness Requirement: Participants are excluded from the analysis if they have fewer than 10 isolated AVR procedures in the patient population. Technical Details The unit of measurement for the STS AVR Composite Score can be either a participant (most often a cardiac surgical practice but occasionally an individual surgeon) or a hospital. For the Absence of Operative Mortality domain, the NUMERATOR is: Number of patients undergoing isolated AVR who survived until after discharge and >30 days post-surgery For the Absence of Major Morbidity domain, the NUMERATOR is: Number of patients undergoing isolated AVR who did not experience any of the five specified major morbidity endpoints* *Morbidity endpoints consist of postoperative stroke/cerebrovascular accident, surgical re-exploration, deep sternal wound infection, renal failure, prolonged intubation (ventilation). Patients with documented history of

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
		renal failure (i.e., dialysis or baseline serum creatinine of 4.0 or higher) are excluded when counting renal failure outcomes. STS AVR risk models are used to estimate expected rates of mortality and any-or-none morbidity (Reference: O'Brien SM, Shahian DM, Filardo G, et al. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: part 2—isolated valve surgery. Ann Thorac Surg 2009;88(1 Suppl):S23–42). To enhance interpretation, mortality rates are converted to survival rates (risk-standardized survival rate = 100 – risk-standardized mortality rate), and morbidity rates are converted to "absence of morbidity" rates (risk-standardized absence of morbidity rate =100 – risk-standardized morbidity rate). Defining scores in this manner ensures that increasingly positive values reflect better performance, which is easier for consumers to interpret. (Please see the appendix for the formula used to calculate the overall composite score.) The method is equivalent to calculating a weighted average, with weights proportional to the inverse of the SD. In the most recent production of the STS AVR Composite Score based on data from July 2010 – June 2013, wtmort=0.79 and wtmorb = 0.21. Star Rating: Star ratings are derived by testing whether the participant's composite or domain score is significantly different from the overall STS average. For instance, if for each of the 2 composite score domains, a participant's estimated score is lower than the overall STS average, but the difference between the participant and STS is not statistically significant, the ratings would each be 2 stars. If however, for the overall composite, the point estimate is lower than the STS average, AND this difference is statistically significant, the overall participant star rating is 1 star. The fact that statistical significance was achieved for the composite score but not the individual domains reflects the greater precision of the composite score compared to individual endpoints. This precision is achieved by aggregating information across multiple endpoints instead of a single endpoint. Additional details regarding the AVR Composite Score are provided in the attached manuscript:

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
		Shahian DM, He X, Jacobs JP, et al. The Society of Thoracic Surgeons Isolated Aortic Valve Replacement (AVR) Composite Score: a report of the STS Quality Measurement Task Force. Ann Thorac Surg 2012;94:2166-71.
Numerator Details	NUMERATOR: 1. Discharge status of expired or 2. Follow-up status=deceased and date difference between index procedure and death date is <=30 or 3. 30-day follow-up status=deceased, death date is missing, and difference between index procedure and follow-up assessment date is <=75 days. * *Notes: The <=75 day follow-up assessment timeframe was identified to be a clinically reasonable surrogate to capture a 30 day death if 30 day follow-up date of death was missing (this occurred in 0.9% of deceased records from January 2015 to December 2017). Sometimes a status of "deceased" is known and documented but the exact date of death is not available. In addition, we validated the accuracy of 30-day mortality in the TVT Registry by comparing Registry data linked CMS claims data from 2012-2015. Across 3.5 years, 99.6% of the 29,247 patient records had no discrepancy.	Please see S.4 above
Denominator Statement	The target population for the outcome is for individuals who have undergone transcatheter aortic valve replacement. For development, reassessment and reporting of this measure, we use site reported data from the STS/ACC TVT Registry.	Due to the complex methodology used to construct the composite measure, it is impractical to separately discuss the numerator and denominator. The following discussion describes how each domain score is calculated and how these are combined into an overall composite score. The STS AVR Composite Score comprises two domains consisting of six individual measures: 1. Absence of Operative Mortality NQF # 0120 Risk-Adjusted Operative Mortality for AVR 2. Absence of Major Morbidity, scored any-or-none. The measures used are the same morbidity outcomes included in NQF #0696 STS CABG Composite Score. Risk-Adjusted Postoperative Stroke/Cerebrovascular Accident

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
		Risk-Adjusted Postoperative Surgical Re-exploration Risk-Adjusted Postoperative Deep Sternal Wound Infection Rate Risk-Adjusted Postoperative Renal Failure Risk-Adjusted Postoperative Prolonged Intubation (Ventilation) Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score is created by "rolling up" the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance). Patient Population: The analysis population consists of adult patients aged 18 years or older who undergo isolated AVR surgery Time Period: 3 years Data Completeness Requirement: Participants are excluded from the analysis if they have fewer than 10 isolated AVR procedures in the patient population. Technical Details The unit of measurement for the STS AVR Composite Score can be either a participant (most often a cardiac surgical practice but occasionally an individual surgeon) or a hospital. For the Absence of Operative Mortality domain AND the Absence of Major Morbidity domain, the DENOMINATOR is: Number of patients undergoing isolated AVR during the measurement period STS AVR risk models are used to estimate expected rates of mortality and any-or-none morbidity (Reference: O'Brien SM, Shahian DM, Filardo G, et al. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: part 2—isolated valve surgery. Ann Thorac Surg 2009;88(1 Suppl):S23–42). To enhance interpretation, mortality rates are converted to survival rates (risk-standardized survival rate = 100 – risk-standardized mortality rate), and morbidity rates are converted to "absence of morbidity" rates (risk-standardized absence of morbidity rate =100 – risk-standardized morbidity rate). Defining scores in this manner ensures that increasingly

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
		positive values reflect better performance, which is easier for consumers to interpret. (Please see the appendix for the formula used to calculate the overall composite score.) The method is equivalent to calculating a weighted average, with weights proportional to the inverse of the SD. In the most recent production of the STS AVR Composite Score based on data from July 2010 – June 2013, wtmort=0.79 and wtmorb = 0.21. Star Rating: Star ratings are derived by testing whether the participant's composite or domain score is significantly different from the overall STS average. For instance, if for each of the 2 composite score domains, a participant's estimated score is lower than the overall STS average, but the difference between the participant and STS is not statistically significant, the ratings would each be 2 stars. If however, for the overall composite, the point estimate is lower than the STS average, AND this difference is statistically significant, the overall participant star rating is 1 star. The fact that statistical significance was achieved for the composite score but not the individual domains reflects the greater precision of the composite score compared to individual endpoints. This precision is achieved by aggregating information across multiple endpoints instead of a single endpoint. Additional details regarding the AVR Composite Score are provided in the attached manuscript: Shahian DM, He X, Jacobs JP, et al. The Society of Thoracic Surgeons Isolated Aortic Valve Replacement (AVR) Composite Score: a report of the STS Quality Measurement Task Force. Ann Thorac Surg 2012;94:2166-71.
Denominator Details	Measure Eligibility and Population Definition 1) Eligibility at the hospital level: a) Acceptable "Data Quality Report" data submissions for each quarter in the reporting period. b) Hospitals must have >=90% completeness of the following items for all patient records in the rolling 3-year reporting period to receive feedback on the measure:	Please see S.6 above

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	i) Computed baseline Kansas City Cardiomyopathy Questionnaire (a key risk model covariate) AND ii) Baseline 5-meter walk test (a key model covariate), AND iii) 30-day follow-up status =alive or dead as defined above (the outcome variable) 2) Eligibility at the patient level: Hospitalization for first-time TAVR procedure	
Exclusions	1) Hospitals need to meet eligibility criteria to be included in the measure. 2) Patients are excluded if: a) They did not have a first-time TAVR in the episode of care (admission), b) The TAVR was subsequent to another procedure in the Registry (other TAVR, Mitral Leaflet Clip and/or TMVR) during that admission. c) The patient is readmitted for a repeat TAVR (re-admission) and the initial TAVR was performed during the rolling 3-year timeframe for the measure. d) 30-day mortality status missing.	Please see S.6 above
Exclusion Details	1) Hospital ineligibility: a) Unacceptable data quality report submissions for all quarters of the reporting time-period. b) Hospitals who have less than 90% of patient records with respect to ANY of the following assessments in the rolling 3-year reporting period: i) Computed baseline Kansas City Cardiomyopathy Questionnaire (a key risk model covariate) OR ii) Baseline 5 meter walk test (a key model covariate), OR iii) 30 day follow-up status =alive or dead as defined above (the outcome variable)	Please see S.6 above

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	2) Patient Ineligibility: a) They did not have a first-time TAVR in the episode of care (admission), b) The TAVR was subsequent to another procedure in the Registry (other TAVR, Mitral Leaflet Clip and/or TMVR) during that admission. c) The patient is readmitted for a repeat TAVR (re-admission) and the initial TAVR was performed during the rolling 3-year timeframe for the measure. d) 30-day mortality status is missing.	
Risk Adjustment	Statistical risk model 118162 118162	Statistical risk model
Stratification	This measure will not be stratified.	N/A
Type Score	Ratio better quality = lower score	Rate/proportion better quality = higher score
Algorithm	The measure score is calculated based on the following steps: 1) Patient cohort is identified based on inclusion criteria (see questions S.7-S.11) 2) Data elements for risk adjusted are collected using the first collected value, as identified below; 3) Outcome is ascertained (see S.5) 4) Measure score is calculated with aggregated data across all included sites as described below. Risk adjustment variables include: 1. Age 2. Body surface area (BSA) 3. Sex 4. Race/ethnicity	Please see S.4 and S.6 above

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	5. Estimated glomerular filtration rate (eGFR), which quantifies kidney function 6. Hemodialysis for end-stage renal disease 7. Left ventricular ejection fraction (LVEF) 8. Hemoglobin 9. Platelet count 10. Procedure date 11. Left main coronary artery stenosis = 50% 12. Proximal left anterior descending coronary artery stenosis = 70% 13. Prior myocardial infarction 14. Endocarditis 15. Gait speed (via the 5-meter walk test which assesses frailty) 16. Baseline Kansas City Cardiomyopathy Questionnaire-12 (KCCQ-12, a measure of heart-failure specific health status) 17. Peripheral artery disease 18. Current/recent smoker 19. Diabetes 20. Atrial fibrillation/flutter 21. Conduction defect 22. Chronic lung disease 23. Home oxygen 24. “Hostile” chest 25. Porcelain (severely concentrically calcified) aorta 26. Access site 27. Pacemaker 28. Previous implantable cardioverter defibrillator 29. Prior percutaneous coronary intervention 30. Prior coronary artery bypass surgery	

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	31. # prior cardiac operations 32. Prior aortic valve surgery/procedure 33. Prior other valve procedure surgery/procedure (mitral, tricuspid, pulmonic) 34. Aortic valve disease etiology 35. Aortic valve morphology 36. Aortic insufficiency (moderate or severe) 37. Mitral insufficiency (moderate or severe) 38. Tricuspid insufficiency (moderate or severe) 39. Acuity status (defined by a combination of procedure status, prior cardiac arrest w/in 24 hours, need for pre-procedure inotropic medications, and use of mechanical assist device) 40. Carotid stenosis 41. Prior transient ischemic attack or stroke Case mix adjustment is implemented using a hierarchical logistic regression model with the above covariates and a site-specific random intercept. The main summary measure of a hospital's risk-adjusted outcomes performance is the hospital's estimated odds ratio, which compares the predicted odds of death of the patient population at a hospital if TAVR is performed by the hospital of interest to the predicted odds of death if TAVR were performed by an average hospital. An odds ratio greater than 1 implies higher than expected mortality and an odds ratio less than 1 implies lower than expected mortality. Each hospital's estimated odds ratio is reported along with an approximate 95% empirical Bayes interval around the estimated odds ratio. Definition of Measure Score Calculation - Odds ratio: a parameter reflecting the association between risk factors and an outcome. The Risk Standardized Odds Ratio is calculated as the odds that an outcome (e.g. 30-day mortality) will occur for	

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	patients treated at your facility compared to the "odds" that outcome will occur for patients with identical risk factors if treated by a hypothetical (average) hospital. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower odds ratio implies lower-than-expected mortality (better quality) and a higher ratio implies higher-than-expected mortality (worse quality). To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period. References: Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22 (2): 206-226. Arnold, S.V. et al. Measures in the Risk Adjustment of 30-Day Mortality After Transcatheter Aortic Valve Replacement: A Report From the Society of Thoracic Surgeons/American College of Cardiology TVT Registry JACC: Cardiovascular Interventions Volume 11, Issue 6, 26 March 2018, Pages 581-589 118162	
Submission items	5.1 Identified measures: 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: While this measure focuses on a different population (ie those undergoing surgical AVR) and different outcomes, the current measure has been harmonized to the extent possible. Residual differences in the two models include the following: 1. Some variables are unique to each population/procedure/measure (e.g. TAVR 30-day RAM includes variables unique to the procedure such as gait speed, KCCQ, access site, porcelain aorta and aortic valve	5.1 Identified measures: 0120 : Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR) 0131 : Risk-Adjusted Stroke/Cerebrovascular Accident 0115 : Risk-Adjusted Surgical Re-exploration 0130 : Risk-Adjusted Deep Sternal Wound Infection 0114 : Risk-Adjusted Postoperative Renal Failure 0129 : Risk-Adjusted Postoperative Prolonged Intubation (Ventilation) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: N/A

	3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).	2561: STS Aortic Valve Replacement (AVR) Composite Score
	morphology). 2. The outcome of each measure is different. TAVR 30-day RAM is subset of the STS AVR Composite Score (which includes 30-day mortality as well as 5 morbidities). 3. The patient population of each measure is different. TAVR 30 day RAM is only patients who had a transcatheter aortic valve replacement procedures. STS AVR Composite is for all patients having an aortic valve replacement (which MAY include a TAVR). 5b.1 If competing, why superior or rationale for additive value: N/A	5b.1 If competing, why superior or rationale for additive value: N/A

Appendix E2: Related and Competing Measures (narrative)

Comparison of NQF 0018, NQF 0061, NQF 2602, NQF 2606, NQF 0729 and NQF 0076

0018: Controlling High Blood Pressure
0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)
2602: Controlling High Blood Pressure for People with Serious Mental Illness
2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)
0729: Optimal Diabetes Care
0076: Optimal Vascular Care

Steward

0018: Controlling High Blood Pressure

National Committee for Quality Assurance

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

National Committee for Quality Assurance

2602: Controlling High Blood Pressure for People with Serious Mental Illness

National Committee for Quality Assurance

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

National Committee for Quality Assurance

0729: Optimal Diabetes Care

MN Community Measurement

0076: Optimal Vascular Care

MN Community Measurement

Description

0018: Controlling High Blood Pressure

The percentage of adults 18-85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure was adequately controlled (<140/90 mm Hg) during the measurement year.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level taken during the measurement year is <140/90 mm Hg.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

The percentage of patients 18-85 years of age with serious mental illness who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled during the measurement year.

Note: This measure is adapted from an existing health plan measure used in a variety of reporting programs for the general population (NQF #0018: Controlling High Blood Pressure). It was originally endorsed in 2009 and is owned and stewarded by NCQA. The specifications for the existing measure (Controlling High Blood Pressure NQF #0018) have

been updated based on 2013 JNC-8 guideline. NCQA will submit the revised specification for Controlling High Blood Pressure NQF #0018 in the 4th quarter 2014 during NQF's scheduled measure update period. This measure uses the new specification to be consistent with the current guideline.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

The percentage of patients 18-75 years of age with a serious mental illness and diabetes (type 1 and type 2) whose most recent blood pressure (BP) reading during the measurement year is <140/90 mm Hg.

Note: This measure is adapted from an existing health plan measure used in a variety of reporting programs for the general population (NQF #0061: Comprehensive Diabetes Care: Blood Pressure Control <140/90 mm Hg) which is endorsed by NQF and is stewarded by NCQA.

0729: Optimal Diabetes Care

The percentage of patients 18-75 years of age who had a diagnosis of type 1 or type 2 diabetes and whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following:

- HbA1c less than 8.0 mg/dL
- Blood Pressure less than 140/90 mmHg
- On a statin medication, unless allowed contraindications or exceptions are present
- Non-tobacco user
- Patient with ischemic vascular disease is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present

Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component.

0076: Optimal Vascular Care

The percentage of patients 18-75 years of age who had a diagnosis of ischemic vascular disease (IVD) and whose IVD was optimally managed during the measurement period as defined by achieving ALL of the following:

- Blood pressure less than 140/90 mmHg
- On a statin medication, unless allowed contraindications or exceptions are present
- Non-tobacco user
- On daily aspirin or anti-platelet medication, unless allowed contraindications or exceptions are present

Type

0018: Controlling High Blood Pressure

Outcome: Intermediate Clinical Outcome

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Outcome: Intermediate Clinical Outcome

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Outcome

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Outcome

0729: Optimal Diabetes Care

Composite

0076: Optimal Vascular Care

Composite

Data Source

0018: Controlling High Blood Pressure

Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan patients. NCQA collects Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system.

No data collection instrument provided Attachment 0018_CBP_Value_Sets_Fall_2019-637002741932672877.xlsx

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan patients. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system.

No data collection instrument provided Attachment 0061_CDC_BP_Control_Value_Sets_Fall_2019-637088223907626862.xlsx

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Claims, Electronic Health Records, Paper Medical Records The denominator for this measure is based on administrative claims and medical record documentation (this is used to confirm the diagnosis of hypertension identified in claims/encounter data). The numerator for this measure is based on medical record documentation collected in the course of providing care to health plan patients.

No data collection instrument provided Attachment 2602_CBP_for_People_With_Mental_Illness_Value_Set-636583543692086216.xlsx

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records The denominator for this measure is based on claim/encounter and pharmacy data. The

numerator for this measure is based on medical record documentation collected in the course of providing care to health plan patients.

No data collection instrument provided Attachment 2606_BP_Control_for_People_With_Mental_Illness_Value_Sets-636583537864052580.xlsx

0729: Optimal Diabetes Care

Electronic Health Records, Paper Medical Records An excel template with formatted columns for data fields is provided. Almost all medical groups in MN (99.5%) extract the information from their EMR. Paper abstraction forms are provided for those clinics who wish to use them as an interim step to create their data file. All data is uploaded in electronic format (.csv file) to a HIPAA secure, encrypted and password protected data portal. We capture information from the clinics about how their data is obtained. In 2018:

• 71% (476) clinics had an EMR and pulled all data via query

• 26% (176) clinics had an EMR and used a combination of query and manual look up for data collection

• 2.2% (15) clinics had an EMR and looked up all data manually

• 0.15% (1) clinic had a hybrid EMR and paper record system

• 0.15% (1) clinic had paper records only

Feasibility Note: 71% of practices can extract all of the information needed via query.

Please note that all fields are defined and included in the data dictionary [Tab = Data Field Dictionary] and also included in the data collection guide URL provided in S.1.

Available at measure-specific web page URL identified in S.1 Attachment MNCM_Diabetes_Measure_Data_Dictionary_and_Risk_Adj__10-19-2018.xlsx

0076: Optimal Vascular Care

Electronic Health Records, Paper Medical Records AAn excel template with formatted columns for data fields is provided. Almost all the medical groups in MN (99.9%) extract the information from their EMR. Other options have been historically available: Registries can be used as a source of information to create the data file; however groups must ensure that all of their eligible patients are included. Paper abstraction forms are provided for those clinics who wish to use them as an interim step to creating their data file.

All data is uploaded in electronic format (.csv file) to a HIPAA secure, encrypted and password protected data portal.

Available at measure-specific web page URL identified in S.1 Attachment MNCM_-0076_Optimal_Vascular_Care_Specs_Fields_12-2019.xlsx

Level

0018: Controlling High Blood Pressure

Health Plan

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Health Plan

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Health Plan

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Health Plan

0729: Optimal Diabetes Care

Clinician : Group/Practice

0076: Optimal Vascular Care

Clinician : Group/Practice

Setting

0018: Controlling High Blood Pressure

Outpatient Services

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Outpatient Services

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Outpatient Services

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Outpatient Services

0729: Optimal Diabetes Care

Outpatient Services

0076: Optimal Vascular Care

Outpatient Services

Numerator Statement

0018: Controlling High Blood Pressure

Patients whose most recent blood pressure level was <140/90 mm Hg during the measurement year.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Patients whose most recent blood pressure level was <140/90 mm Hg during the measurement year.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Patients whose most recent blood pressure (BP) is adequately controlled during the measurement year (after the diagnosis of hypertension) based on the following criteria:

-Patients 18-59 years of age as of December 31 of the measurement year whose BP was <140/90 mm Hg.

-Patients 60-85 years of age as of December 31 of the measurement year and flagged with a diagnosis of diabetes whose BP was <140/90 mm Hg.

-Patients 60-85 years of age as of December 31 of the measurement year and flagged as not having a diagnosis of diabetes whose BP was <150/90 mm Hg.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Patients whose most recent BP reading is less than 140/90 mm Hg during the measurement year.

This intermediate outcome is a result of blood pressure control (<140/90 mm Hg). Blood pressure control reduce the risk of cardiovascular diseases. There is no need for risk adjustment for this intermediate outcome measure.

0729: Optimal Diabetes Care

The number of patients in the denominator whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following:

• The most recent HbA1c in the measurement period has a value less than 8.0 mg/dL

• The most recent Blood Pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg

• On a statin medication, unless allowed contraindications or exceptions are present

• Patient is not a tobacco user

• Patient with ischemic vascular disease (Ischemic Vascular Disease Value Set) is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present

0076: Optimal Vascular Care

The number of patients in the denominator whose IVD was optimally managed during the measurement period as defined by achieving ALL of the following:

• The most recent blood pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg

• On a statin medication, unless allowed contraindications or exceptions are present

• Patient is not a tobacco user

• On daily aspirin or anti-platelet medication, unless allowed contraindications or exceptions are present

Numerator Details

0018: Controlling High Blood Pressure

There are two data sources and approaches used for collecting data reporting the numerator for this measure: Administrative Claims and Medical Record Review

ADMINISTRATIVE CLAIMS

Use codes (See code value sets located in question S.2b.) to identify the most recent BP reading taken during an outpatient visit, a nonacute inpatient encounter, or remote monitoring event during the measurement year.

The blood pressure reading must occur on or after the date when the second diagnosis of hypertension (identified using the event/diagnosis criteria).

The patient is numerator compliant if the blood pressure is <140/90 mm Hg. The patient is not compliant if the blood pressure is >=140/90 mm Hg, if there is no blood pressure reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing). If there are multiple blood pressure readings on the same date of service, use the lowest systolic and lowest diastolic blood pressure on that date as the presentative blood pressure.

Organizations that use CPT Category II codes to identify numerator compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for both systolic and diastolic levels.

VALUE SET / NUMERATOR COMPLIANCE

Systolic Less Than 140 Value Set / Systolic compliant

Systolic Greater Than or Equal to 140 Value Set / Systolic not compliant

Diastolic Less Than 80 Value Set / Diastolic compliant

Diastolic 80-89 Value Set / Diastolic compliant

Diastolic Greater Than or Equal to 90 Value Set / Diastolic not compliant

See attached code value sets.

MEDICAL RECORD REVIEW

The number of patients in the denominator whose most recent blood pressure (both systolic and diastolic) is adequately controlled during the measurement year. For a patient's blood pressure to be controlled the systolic and diastolic blood pressure must be <140/90 mm hg (adequate control). To determine if a member's blood pressure is adequately controlled, the representative blood pressure must be identified.

All eligible blood pressure measurements recorded in the record must be considered. If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator.

Use the following guidance to find the appropriate medical record to review.

- Identify the patient's PCP.

- If the patient had more than one PCP for the time-period, identify the PCP who most recently provided care to the patient.

- If the patient did not visit a PCP for the time-period or does not have a PCP, identify the practitioner who most recently provided care to the patient.

- If a practitioner other than the patient's PCP manages the hypertension, the organization may use the medical record of that practitioner.

Identify the most recent blood pressure reading noted during the measurement year.

The blood pressure reading must occur on or after the date when the second diagnosis of hypertension (identified using the event/diagnosis criteria) occurred.

Do not include BP readings:

- Taken during an acute inpatient stay or an ED visit.

- Taken on the same day as a diagnostic test or diagnostic or therapeutic procedure that requires a change in diet or change in medication on or one day before the day of the test or procedure, with the exception of fasting blood tests.

- Reported by or taken by the patient.

BP readings from remote monitoring devices that are digitally stored and transmitted to the provider may be included. There must be documentation in the medical record that clearly states the reading was taken by an electronic device, and results were digitally stored and transmitted to the provider and interpreted by the provider.

Identify the lowest systolic and lowest diastolic BP reading from the most recent BP notation in the medical record. If multiple readings were recorded for a single date, use

the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading.

The patient is not compliant if the BP reading is =140/90 mm Hg or is missing, or if there is no BP reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing).

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

There are two data sources and approaches used for collecting data and reporting the numerator for this measure: Administrative Claims and Medical Record Review.

ADMINISTRATIVE CLAIMS

Use codes (See code value sets located in question S.2b.) to identify the most recent blood pressure reading taken during an outpatient visit or a nonacute inpatient encounter or remote monitoring event during the measurement year.

The patient is numerator compliant if the blood pressure is <140/90 mm Hg. The patient is not compliant if the blood pressure is =140/90 mm Hg, if there is no blood pressure reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing). If there are multiple blood pressure readings on the same date of service, use the lowest systolic and lowest diastolic blood pressure on that date as the representative blood pressure.

Organizations that use CPT Category II codes to identify numerator compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for both systolic and diastolic levels.

VALUE SET / NUMERATOR COMPLIANCE

Systolic Less Than 140 Value Set / Systolic compliant

Systolic Greater Than or Equal to 140 Value Set / Systolic noncompliant

Diastolic Less Than 80 Value Set / Diastolic compliant

Diastolic 80-89 Value Set / Diastolic compliant

Diastolic Greater Than or Equal to 90 Value Set / Diastolic not compliant

See attached code value sets.

MEDICAL RECORD REVIEW

The most recent BP level (taken during the measurement year) is <140/90 mm Hg, as documented through administrative data or medical record review.

The organization should use the medical record from which it abstracts data for the other measures in the Comprehensive Diabetes Care set. If the organization does not abstract for other measures, it should use the medical record of the provider that manages the patient's diabetes. If that medical record does not contain a BP, the organization may use the medical record of another PCP or specialist from whom the patient receives care.

Identify the most recent blood pressure reading noted during the measurement year. Do not include blood pressure readings that meet the following criteria:

-Taken during an acute inpatient stay or an ED visit.

-Taken on the same day as a diagnostic test or diagnostic or therapeutic procedure that requires a change in diet or change in medication on or one day before the day of the test or procedure, with the exception of fasting blood tests.

-Reported by or taken by the patient.

Blood pressure readings from remote monitoring devices that are digitally stored and transmitted to the provider may be included. There must be documentation in the medical record that clearly states the reading was taken by an electronic device, and results were digitally stored and transmitted to the provider and interpreted by the provider.

Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record. If there are multiple blood pressure readings recorded for a single date, use the lowest systolic and lowest diastolic blood pressure on that date as the representative blood pressure. The systolic and diastolic results do not need to be from the same reading when multiple readings are recorded for a single date.

The patient is not numerator compliant if the blood pressure does not meet the specified threshold or is missing, or if there is no blood pressure reading during the measurement year or if the reading is incomplete (i.e., the systolic or diastolic level is missing).

2602: Controlling High Blood Pressure for People with Serious Mental Illness

The number of patients whose most recent blood pressure (BP) is adequately controlled during the measurement year, but after the diagnosis of hypertension (See Essential Hypertension Value Set). For an individual's BP to be adequately controlled, both the systolic and diastolic BP must -85meet the following criteria:

- Patients 18-59 years of age as of December 31 of the measurement year whose BP was <140/90 mm Hg.

- Patients 60-85 years of age as of December 31 of the measurement year and flagged with a diagnosis of diabetes

whose BP was <140/90 mm Hg.

- Patients 60-85 years of age as of December 31 of the measurement year and flagged as not having a diagnosis of

diabetes whose BP was <150/90 mm Hg.

To determine if an individual's BP is adequately controlled, the representative BP (i.e., the most recent BP reading during the measurement year but after the diagnosis of hypertension was made) must be identified.

Note: Only the medical records of one practitioner or provider team should be used for both the confirmation of the diagnosis of hypertension and the representative BP. All eligible BP measurements recorded in the records from one practitioner or provider team (even if obtained by a different practitioner) should be considered (e.g., from a consultation note or other note relating to a BP reading from a health care practitioner or provider team). If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator.

The numerator should be calculated using the following steps:

Step 1: Identify the patient's Primary Care Provider (PCP).

-If the patient had more than one PCP for the time period, identify the PCP who most recently provided care to the patient.

-If the patient did not visit a PCP for the time period or does not have a PCP, identify the practitioner who most recently provided care to the patient.

-If a practitioner other than the patient's PCP manages the hypertension, the organization may use the medical record of that practitioner.

Step 2: Identify the representative BP level, defined as the most recent BP reading during the measurement year.

-The reading must occur after the date when the diagnosis of hypertension was made or confirmed.

-If multiple BP measurements occur on the same date, or are noted in the chart on the same date, the lowest systolic and lowest diastolic BP reading should be used. The systolic and diastolic results do not need to be from the same reading

-If no BP is recorded during the measurement year, assume that the individual is "not controlled."

-Do not include BP readings that meet the following criteria:

- Taken during an acute inpatient stay or an ED visit
- Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole)
- Obtained the same day as a major diagnostic or surgical procedure (e.g., stress test, administration of IV contrast for a radiology procedure, endoscopy)
- Reported by or taken by the patient

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

ADMINISTRATIVE:

Use automated data to identify the most recent BP reading taken during an outpatient visit (see Outpatient Visit Value Set) or a nonacute inpatient encounter (Nonacute Inpatient Value Set) during the measurement year. The patient is numerator compliant if the BP is <140/90 mm Hg. The patient is not compliant if the BP is =140/90 mm Hg, if there is no BP reading during the measurement year or if the reading is incomplete (e.g., the systolic or diastolic level is missing). If there are multiple BPs on the same date of service, use the lowest systolic and lowest diastolic BP on that date as the representative BP. Organizations that use CPT Category II codes to identify numerator compliance for this indicator must search for all codes in the following value sets and use the most recent codes during the measurement year to determine numerator compliance for both systolic and diastolic levels.

VALUE SET / NUMERATOR COMPLIANCE

Systolic Less Than 140 Value Set / Systolic compliant

Systolic Greater Than/Equal To 140 Value Set / Systolic not compliant

Diastolic Less Than 80 Value Set / Diastolic compliant

Diastolic 80–89 Value Set / Diastolic compliant

Diastolic Greater Than/Equal To 90 Value Set / Diastolic not compliant

MEDICAL RECORD:

The organization should use the medical record from which it abstracts data for the other diabetes care indicators such as HbA1c test. If the organization does not abstract for other indicators, it should use the medical record of the provider that manages the patient's

diabetes. If that medical record does not contain a BP, the organization may use the medical record of another PCP or specialist from whom the patient receives care.

To determine if BP is adequately controlled, the organization must identify the representative BP following the steps below.

Identify the most recent BP reading noted during the measurement year. Do not include BP readings that meet the following criteria:

-Taken during an acute inpatient stay or an ED visit.

-Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole).

-Obtained the same day as a major diagnostic or surgical procedure (e.g., stress test, administration of IV contrast for a radiology procedure, endoscopy).

Reported by or taken by the patient.

Identify the lowest systolic and lowest diastolic BP reading from the most recent BP notation in the medical record. If there are multiple BPs recorded for a single date, use the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading when multiple readings are recorded for a single date. The patient is not numerator compliant if the BP does not meet the specified threshold or is missing, or if there is no BP reading during the measurement year or if the reading is incomplete (i.e., the systolic or diastolic level is missing).

0729: Optimal Diabetes Care

Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component and note that all of the denominator criteria apply to the numerator as well, but are not repeated in the numerator codes/ descriptions.

HbA1c Date [Date (mm/dd/yyyy)] AND

HbA1c Value [Numeric]

Numerator component calculation: numerator component compliant is HbA1c during the last 12 months (measurement year) AND most recent HbA1c value is less than 8.0.

Enter the date of the most recent HbA1c test during the measurement period.

Enter the value of the most recent HbA1c test during the measurement period.

Leave BLANK if an HbA1c was never performed.

- A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.
- If the HbA1c result is too high to calculate, still enter the HbA1c test date if it is the most recent test result during the measurement period.

Blood Pressure Date [Date (mm/dd/yyyy)] AND

BP Systolic [Numeric] AND

BP Diastolic [Numeric]

Numerator component calculation: numerator component compliant is BP during the measurement year AND Systolic < 140 AND Diastolic < 90.

Enter the date of the most recent blood pressure result during the measurement period.

Leave BLANK if a blood pressure was not obtained during the measurement period.

- A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.
- Do not include BP readings:

o Taken during an acute inpatient stay or an ED visit.

o Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole).

o Obtained the same day as a major diagnostic or surgical procedure (e.g., EKG/ECG, stress test, administration of IV contrast for a radiology procedure, endoscopy).

o Reported by or taken by the patient.

BP Systolic

Enter the value of the most recent systolic blood pressure result during the measurement period.

If more than one value is recorded on the most recent date, the lowest systolic value from multiple readings on the same date may be submitted.

NOTE: The systolic blood pressure is the upper number in the recorded fraction. For example, the systolic value for a blood pressure of 124/72 mmHg is 124.

BP Diastolic

Enter the value of the most recent diastolic blood pressure result during the measurement period.

If more than one value is recorded on the most recent date, the lowest diastolic value from multiple readings on the same date may be submitted.

- NOTE: The diastolic blood pressure is the lower number in the recorded fraction. For example, the diastolic value for a blood pressure of 124/72 mmHg is 72.

LDL Date [Date (mm/dd/yyyy)] AND

LDL Value [Numeric]

Numerator component calculation: Is used for the cholesterol component for statin use; patients with low untreated LDL values may not be appropriate for the initiation of statin medication.

Enter the date of the most recent LDL test on or prior to the end of the measurement period.

Leave BLANK if an LDL was never performed.

- A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result within the allowable time period.
- If the LDL result is too high to calculate, still enter the LDL test date if it is the most recent test result within the allowable time period.

LDL values within the last five years will be used to calculate potential exceptions to being on a statin medication. Leave BLANK if an LDL test was not performed between 01/01/201x and 12/31/201x (five-year increments).

Statin Medication [Numeric] AND

Statin Medication Date [Date (mm/dd/yyyy)] AND/OR

Station Medication Exception [Numeric] AND

Station Medication Exception Date [Date (mm/dd/yyyy)]

Numerator component calculation: numerator component compliant if on a statin (prescribed/ ordered) or low LDL value (see above) or documented contraindication/exception is present.

Statin Medication:

Enter the code that corresponds to whether the patient was prescribed a statin medication or if a statin medication was active on the patient's medication list during the measurement period.

Please refer to Appendix C for a list of statin medications.

1 = Yes, patient was prescribed a statin medication or a statin medication was indicated as active on the patient's medication list during the measurement period.

2 = No, patient was not prescribed a statin medication and a statin medication was not indicated as active on the patient's medication list during the measurement period.

The following exceptions to statin medication use will be identified by the Data Portal based on the submitted LDL values:

- Patients with ischemic vascular disease aged 21 to 75 years and an LDL result less than 40 mg/dL
- Patients aged 40 – 75 years with an LDL result less than 70 mg/dL
- Patients aged 21 – 39 years with an LDL less than 190 mg/dL

Statin Medication Date:

Enter the most recent date of a statin prescription, order or review of active medications list during the measurement period.

If no statin prescribed, ordered, or reviewed as an active medication during the measurement period, leave blank

Statin Medication Exception:

If the patient was NOT prescribed or did not have a statin medication active on their medication list during the measurement period, enter the value that corresponds to any of the following contraindications or exceptions:

1 = Pregnancy at any time during the measurement period

2 = Active liver disease (liver failure, cirrhosis, hepatitis)

3 = Rhabdomyolysis

4 = End stage renal disease on dialysis

5 = Heart failure

6 = Other provider documented reason: breastfeeding during the measurement period

7 = Other provider documented reason: woman of childbearing age not actively taking birth control during the measurement period

8 = Other provider documented reason: allergy to statin

9 = Drug interaction with a listed medication taken during the measurement period (valid drug-drug interactions include HIV protease inhibitors, nefazodone, cyclosporine, gemfibrozil, and danazol).

10 = Other provider documented reason: intolerance (with supporting documentation of trying a statin at least once within the last five years). Additionally, Myopathy and Myositis (CHOL-05) Value Set may be used to document intolerance to statins.

If none of the above contraindications or exceptions are documented, leave BLANK. NOTE: Items 1 – 5 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: Pregnancy V/Z Codes (PREG-01), Pregnancy Diagnosis Codes (PREG-02), Liver Disease (CHOL-01), Rhabdomyolysis (CHOL-02), ESRD on Dialysis (CHOL-03), and Heart Failure (CHOL-04)

Statin Medication Exception Date:

If the patient has a documented contraindication or exception enter the date of the contraindication or exception. If only the month and year are known, enter the first day of the month.

Tobacco Status Documentation Date [Date (mm/dd/yyyy)] AND

Tobacco Status [Numeric]

Numerator component calculation: numerator component compliant if tobacco status within the last two years and status is tobacco-free.

Tobacco Status Documentation Date:

Enter the most recent date that the patient's tobacco status was documented during the measurement period or year prior.

• If the patient's tobacco status is not documented or the date of documentation cannot be determined, leave BLANK

Tobacco Status:

Enter the code that corresponds to the patient's most recent tobacco status during the measurement period or year prior.

1 = Tobacco free (patient does not use tobacco; patient was a former user and is not a current user)

2 = No documentation

3 = Current tobacco user (tobacco includes any amount of cigarettes, cigars, pipes or smokeless tobacco)

- If the date of the tobacco status documentation is not documented in the patient record, enter 2
- E-cigarettes are not considered tobacco products.

Aspirin or Anti-platelet Medication [Numeric] AND

Aspirin or Anti-platelet Date [Date (mm/dd/yyyy)] AND/OR

Aspirin or Anti-platelet Exception [Numeric] AND

Aspirin or Anti-platelet Exception Date [Date (mm/dd/yyyy)]

Numerator component calculation: Calculation applied only if patient has ischemic vascular disease (IVD); if no IVD indicated, is a numerator component "free-pass". For patients with

IVD, numerator component compliant if indicated on daily aspirin or anti-platelet medication (prescribed/ ordered) or documented contraindication/exception is present.

Aspirin or Anti-platelet Medication:

For patients with Ischemic Vascular Disease (IVD), enter the code that corresponds to whether the patient is prescribed a daily aspirin product or antiplatelet medication or if an aspirin product or anti-platelet medication was active on the patient's medication list during the measurement period.

Please see Appendix D for methods to identify appropriate aspirin products or antiplatelet medications.

1 = Yes, patient was prescribed a daily aspirin product or antiplatelet medication, or one was indicated as active on the patient's medication list during the measurement period.

2 = No, patient was not prescribed a daily aspirin product or antiplatelet medication and one was not indicated as active on the patient's medication list during the measurement period.

Aspirin/narcotic combination medications do not qualify as a daily aspirin product.

Aspirin or Anti-platelet Date:

For patients with IVD, enter the date of the most recent daily aspirin product or anti-platelet medication prescription, order or review of an active medication list that included a daily aspirin product or anti-platelet medication during the measurement period.

If a daily aspirin product or anti-platelet medication was not prescribed, ordered or reviewed as an active medication during the measurement period leave blank

Aspirin or Anti-platelet Medication Exception:

For patients with IVD who were not prescribed or taking a daily aspirin product or anti-platelet medication during the measurement period, enter the code that corresponds to any of the following contraindications or exceptions:

1 = Prescribed anti-coagulant medication during the measurement period

2 = History of gastrointestinal bleeding

3 = History of intracranial bleeding

4 = Bleeding disorder

5 = Other provider documented reason: allergy to aspirin or anti-platelets

6 = Other provider documented reason: use of non-steroidal anti-inflammatory agents

7 = Other provider documented reason: documented risk for drug interaction with a medication taken during the measurement period.

8 = Other provider documented reason: uncontrolled hypertension (systolic blood pressure greater than 180 mmHg and/or diastolic blood pressure greater than 110 mmHg)

9 = Other provider documented reason: gastroesophageal reflux disease (GERD)

If none of the above contraindications or exceptions are documented, leave BLANK.

NOTE: Items 2 and 3 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: GI Bleed (ASA-01) and Intracranial Bleed (ASA-02).

Aspirin or Anti-platelet Medication Exception Date:

If the patient has a documented aspirin product or anti-platelet medication exception enter the date of the contraindication or exception.

0076: Optimal Vascular Care

In order to be numerator compliant all four components must be met

* Blood pressure less than 140/90 mmHg AND

* On a statin medication, unless allowed contraindications or exceptions are present AND

* Non-tobacco user AND

* On daily aspirin or anti-platelet medication, unless allowed contraindications or exceptions are present

BLOOD PRESSURE COMPONENT

Blood Pressure Date [Date (mm/dd/yyyy)] AND

BP Systolic [Numeric] AND

BP Diastolic [Numeric]

Numerator component calculation: numerator component compliant is BP during the measurement year AND Systolic < 140 AND Diastolic < 90.

BP Date

Enter the date of the most recent blood pressure result during the measurement period.

- A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.
- Do not include BP readings:
  - Taken during an acute inpatient stay or an ED visit.
  - Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed (e.g., sigmoidoscopy, removal of a mole).
  - Obtained the same day as a major diagnostic or surgical procedure (e.g., EKG/ECG, stress test, administration of IV contrast for a radiology procedure, endoscopy).
  - Reported by or taken by the patient.
- Leave BLANK if a blood pressure was not obtained during the measurement period.

BP Systolic

Enter the value of the most recent systolic blood pressure result during the measurement period.

- If more than one value is recorded on the most recent date, the lowest value may be submitted. It does NOT need to be from the same reading submitted in Column Z (BP Diastolic).
- NOTE: The systolic blood pressure is the upper number in the recorded fraction. For example, the systolic value for a blood pressure of 124/72 mmHg is 124.
- Leave BLANK if a blood pressure was not obtained during the measurement period.

BP Diastolic

Enter the value of the most recent diastolic blood pressure result during the measurement period.

- If more than one value is recorded on the most recent date, the lowest value may be submitted. It does NOT need to be from the same reading as submitted in (BP Systolic).

- NOTE: The diastolic blood pressure is the lower number in the recorded fraction. For example, the diastolic value for a blood pressure of 124/72 mmHg is 72.
- Leave BLANK if a blood pressure was not obtained during the measurement period.

CHOLESTEROL MANAGEMENT STATIN COMPONENT

LDL Date [Date (mm/dd/yyyy)] AND

LDL Value [Numeric]

For calculating exceptions to statin use based on very low LDL (< 40 for cardiovascular disease and < 70 for patients with diabetes)

Enter the date of the most recent LDL test result between 01/01/2015 and 12/31/2019.

- A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result within the allowable time period.
- If the LDL result is too high to calculate, still enter the LDL test date if it is the most recent test result within the allowable time period.
- LDL values within the last five years will be used to calculate potential exceptions to being on a statin medication.
- Leave BLANK if an LDL test was not performed between 01/01/2015 and 12/31/2019.

Enter the value of the most recent LDL test result between 01/01/2015 and 12/31/2019.

- Leave BLANK if an LDL test was not performed during the allowable time period, or if the most recent test result was too high to calculate.

Statin Medication [Numeric] AND

Statin Medication Date [Date (mm/dd/yyyy)] AND/OR

Station Medication Exception [Numeric] AND

Station Medication Exception Date [Date (mm/dd/yyyy)]

Numerator component calculation: numerator component compliant if on a statin (prescribed/ ordered) or low LDL value (see above) or documented contraindication/exception is present.

Statin Medication:

Enter the code that corresponds to whether the patient was prescribed a statin medication or if a statin medication was active on the patient's medication list during the measurement period.

Please see Appendix A for a list of statin medications.

1 = Yes, patient was prescribed a statin medication, or a statin medication was indicated as active on the patient's medication list during the measurement period.

2 = No, patient was not prescribed a statin medication and a statin medication was not indicated as active on the patient's medication list during the measurement period.

- The following exceptions to statin medication use will be identified by the Data Portal based on the submitted LDL values:
  - Patients with ischemic vascular disease aged 21 to 75 years and an LDL result less than 40 mg/dL
  - Patients aged 40 – 75 years with an LDL result less than 70 mg/dL
  - Patients aged 21 – 39 years with an LDL less than 190 mg/dL

Statin Medication Date

Enter the date of the most recent statin prescription, order or review on an active medications list that included a statin during the measurement period.

- If a statin was not prescribed, ordered, or reviewed as an active medication during the measurement period, leave BLANK.

Station Medication Exception

If the patient was NOT prescribed or did not have a statin medication active on their medication list during the measurement period (Column AA = 2), enter the value that corresponds to any of the following contraindications or exceptions:

1 = Pregnancy at any time during the measurement period

2 = Active liver disease (liver failure, cirrhosis, hepatitis)

3 = Rhabdomyolysis

4 = End stage renal disease on dialysis

5 = Heart failure

6 = Other provider documented reason: breastfeeding during the measurement period

7 = Other provider documented reason: woman of childbearing age not actively taking birth control during the measurement period

8 = Other provider documented reason: allergy to statin

9 = Drug interaction with a listed medication taken during the measurement period (valid drug-drug interactions include HIV protease inhibitors, nefazodone, cyclosporine, gemfibrozil, and danazol).

10 = Other provider documented reason: intolerance (with supporting documentation of trying a statin at least once within the last five years). Additionally, Myopathy and Myositis (CHOL-05) Value Set may be used to document intolerance to statins.

- If none of the above contraindications or exceptions are documented, leave BLANK.
- NOTE: Items 1 – 5 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: Pregnancy V/Z Codes (PREG-01), Pregnancy Diagnosis Codes (PREG-02), Liver Disease (CHOL-01), Rhabdomyolysis (CHOL-02), ESRD on Dialysis (CHOL-03), and Heart Failure (CHOL-04)

Statin Medication Exception Date:

If the patient has a documented contraindication or exception enter the date of the contraindication or exception.

- If only the month and year are known, enter the first day of the month.

ASPIRIN/ANTIPLATELET COMPONENT

Aspirin or Anti-platelet Medication [Numeric] AND

Aspirin or Anti-platelet Date [Date (mm/dd/yyyy)] AND/OR

Aspirin or Anti-platelet Exception [Numeric] AND

Aspirin or Anti-platelet Exception Date [Date (mm/dd/yyyy)]

Numerator component calculation: numerator component compliant if indicated on daily aspirin or anti-platelet medication (prescribed/ ordered) or documented contraindication/exception is present.

Aspirin or Anti-platelet Medication

Enter the code that corresponds to whether the patient is prescribed a daily aspirin product or antiplatelet medication or if an aspirin product or anti-platelet medication was active on the patient's medication list at any time during the measurement period.

Please see Appendix B for methods to identify appropriate aspirin products or antiplatelet medications.

1 = Yes, patient was prescribed a daily aspirin product or antiplatelet medication, or one was indicated as active on the patient's medication list during the measurement period.

2 = No, patient was not prescribed a daily aspirin product or antiplatelet medication and one was not indicated as active on the patient's medication list during the measurement period.

- Aspirin/narcotic combination medications do not qualify as a daily aspirin product.

Aspirin or Anti-platelet Medication Date

Enter the date of the most recent daily aspirin product or anti-platelet medication prescription, order or review of an active medication list that included a daily aspirin product or anti-platelet medication during the measurement period.

* If a daily aspirin product or anti-platelet medication was not prescribed, ordered or reviewed as an active medication during the measurement period, leave blank.

Aspirin or Anti-platelet Medication Exception

For patients who were not prescribed or taking a daily aspirin product or anti-platelet medication during the measurement period, enter the code that corresponds to any of the following contraindications or exceptions:

1 = Prescribed anti-coagulant medication during the measurement period

2 = History of gastrointestinal bleeding

3 = History of intracranial bleeding

4 = Bleeding disorder

5 = Other provider documented reason: allergy to aspirin or anti-platelets

6 = Other provider documented reason: use of non-steroidal anti-inflammatory agents

7 = Other provider documented reason: documented risk for drug interaction

8 = Other provider documented reason: uncontrolled hypertension (systolic blood pressure greater than 180 mmHg and/or diastolic blood pressure greater than 110 mmHg)

9 = Other provider documented reason: gastroesophageal reflux disease (GERD)

If none of the above contraindications or exceptions are documented, leave BLANK.

NOTE: Items 1 and 2 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: GI Bleed (ASA-01) and Intracranial Bleed (ASA-02).

Aspirin or Anti-platelet Exception Date

If the patient has a documented contraindication or exception enter the date of the contraindication or exception. If only the month and year are known, enter the first day of the month.

TOBACCO COMPONENT

Tobacco Status Documentation Date [Date (mm/dd/yyyy)] AND

Tobacco Status [Numeric]

Numerator component calculation: numerator component compliant if tobacco status within the last two years and status is tobacco-free.

Tobacco Status Documentation Date:

Enter the most recent date that the patient's tobacco status was documented during the measurement period or year prior.

If the patient's tobacco status is not documented or the date of the documentation cannot be determined, leave BLANK.

Tobacco Status:

Enter the code that corresponds to the patient's most recent tobacco status during the measurement period or year prior.

1 = Tobacco free (patient does not use tobacco; patient was a former user and is not a current user)

2 = No documentation

3 = Current tobacco user (tobacco includes any amount of cigarettes, cigars, pipes or smokeless tobacco)

* If the date of the tobacco status documentation is not documented in the patient record, enter 2.

* E-cigarettes are not considered tobacco products.

A blank field will create an ERROR upon submission.

Denominator Statement

0018: Controlling High Blood Pressure

Patients 18-85 years of age who had at least two visits on different dates of service with a diagnosis of hypertension during the measurement year or the year prior to the measurement year.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Patients 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 and type 2) during the measurement year or the year prior to the measurement year.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

All patients 18-85 years of age as of December 31 of the measurement year with at least one acute inpatient visit or two outpatient visits for schizophrenia or bipolar I disorder, or at least one inpatient visit for major depression during the measurement year AND a diagnosis of hypertension on or before June 30th of the measurement year.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

All patients 18-75 years of age as of December 31 of the measurement year with at least one acute inpatient visit or two outpatient visits for schizophrenia or bipolar I disorder, or at least one inpatient visit for major depression during the measurement year AND diabetes (type 1 and type 2) during the measurement year or year prior to the measurement year.

0729: Optimal Diabetes Care

Patients ages 18 to 75 with a diagnosis of diabetes (Diabetes Value Set) with any contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND problem list must be queried for diagnosis (Diabetes Value Set).

AND patient has at least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

0076: Optimal Vascular Care

Patients ages 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period who have a diagnosis of ischemic vascular disease (Ischemic Vascular Disease Value Set) with any contact during the current or prior measurement period OR had ischemic vascular disease (Ischemic Vascular Disease Value Set) present on an active problem list at any time during the measurement period.

Both contacts AND the active problem list must be queried for diagnosis (Ischemic Vascular Disease)

AND

At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

Denominator Details

0018: Controlling High Blood Pressure

Patients who had continuous enrollment in the measurement year. No more than one gap in continuous enrollment of up to 45 days during the measurement year. If the patient has Medicaid, then no more than a 1-month gap in coverage.

Patients are identified for the denominator using claim/encounter data.

Patients who had at least two visits on different dates of service with a diagnosis of hypertension during the measurement year or the year prior to the measurement year. Visit type need not be the same for the two visits.

Any of the following combinations meet criteria:

- Outpatient visit with any diagnosis of hypertension

- A telephone visit with any diagnosis of hypertension

- An online assessment with any diagnosis of hypertension

Only one of the two visits may be a telephone visit, an online assessment or an outpatient telehealth visit. Identify outpatient telehealth visits by the presence of a telehealth modifier or the presence of a telehealth POS code associated with the outpatient visit.

See attached code value sets.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

There are two ways to identify patients with diabetes: by claim/encounter data and by pharmacy data. The organization must use both methods to identify the eligible population, but a patient only needs to be identified by one method to be included in the

measure. Patients may be identified as having diabetes during the measurement year or the year prior to the measurement year.

CLAIM/ENCOUNTER DATA

Patients who met any of the following criteria during the measurement year of the year prior to the measurement year (count services that occur over both years):

- At least one acute inpatient encounter with a diagnosis of diabetes without telehealth.

- At least one acute inpatient discharge with a diagnosis of diabetes on the discharge claim. To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

- At least two outpatient visits, observation visits, telephone visits, online assessments, ED visits, nonacute inpatient encounters or nonacute inpatient discharges, on different dates of service, with a diagnosis of diabetes. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the discharge date for the stay.

-- Only include nonacute inpatient encounters without telehealth.

-- Only one of the two visits may be an outpatient telehealth visit, a telephone visit or an online assessment. Identify telehealth visits by the presence of a telehealth modifier or the presence of a telehealth POS code associated with the outpatient set.

See attached code value sets.

PHARMACY DATA

Patients who were dispensed insulin or hypoglycemics/antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year.

PRESCRIPTIONS TO IDENTIFY MEMBERS WITH DIABETES

DESCRIPTION / PRESCRIPTION

Alpha-glucosidase inhibitors / Acarbose, Miglitol

Amylin analogs / Pramlintide

Antidiabetic combinations / Alogliptin-metformin, Alogliptin-pioglitazone, Canagliflozin-metformin, Dapagliflozin-metformin, Empagliflozin-linagliptin, Empagliflozin-metformin, Glimepiride-pioglitazone, Glipizide-metformin, Glyburide-metformin, Linagliptin-metformin, Metformin-pioglitazone, Metformin-repaglinide, Metformin-rosiglitazone, Metformin-saxagliptin, Metformin-sitagliptin

Insulin / Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin degludec, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin regular human, Insulin human inhaled

Meglitinides / Nateglinide, Repaglinide

Glucagon-like peptide-1 (GLP1) agonists / Dulaglutide, Exenatide, Albiglutide, Liraglutide

Sodium glucose cotransporter 2 (SGLT2) inhibitor / Canagliflozin, Dapagliflozin, Empagliflozin

Sulfonylureas / Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide

Thiazolidinediones / Pioglitazone, Rosiglitazone

Dipeptidyl peptidase-4 (DDP-4) inhibitors / Alogliptin, Linagliptin, Saxagliptin, Sitagliptin

Note: Glucophage/metformin as a solo agent is not included because it is used to treat conditions other than diabetes; members with diabetes on these medications are identified through diagnosis codes only.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Age: 18-85 years as of December 31 of the measurement year

Benefit: Medical

Continuous Enrollment: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the individual may not have more than a 1-month gap in coverage (i.e., an individual whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

Identify Serious Mental Illness:

Identify patients with a serious mental illness. They must meet at least one of the following criteria during the measurement year or the year prior:

At least one acute inpatient claim/encounter with any diagnosis of schizophrenia, bipolar I disorder, or major depression using any of the following code combinations:

- BH Stand Alone Acute Inpatient Value Set with one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- Major Depression Value Set
- BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- Major Depression Value Set

At least two visits in an outpatient, intensive outpatient, partial hospitalization, ED or non-acute inpatient setting, on different dates of service, with any diagnosis of schizophrenia or bipolar I disorder. Any two of the following code combinations meet criteria:

- BH Stand Alone Outpatient/PH/IOP Value Set with one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- BH Outpatient/PH/IOP Value Set with BH Outpatient/PH/IOP POS Value Set and one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set

- ED Value Set with one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- BH ED Value Set with BH ED POS Value Set and one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- BH Stand Alone Nonacute Inpatient Value Set with one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set
- BH Nonacute Inpatient Value Set with BH Nonacute Inpatient POS Value Set and one of the following diagnoses:
- Schizophrenia Value Set
- Bipolar Disorder Value Set

Identify Hypertension:

A diagnosis of hypertension is identified if there is at least one outpatient visit (Outpatient CPT Value Set) with a diagnosis of hypertension (Essential Hypertension Value Set) during the first six months of the measurement year and confirmed with a notation of one of the following in the medical record on or before June 30 of the measurement year:

Hypertension

Intermittent HTN

HTN

History of HTN

High BP

Hypertensive vascular disease (HVD)

Hyperpiesia

Hyperpiesis

Borderline HTN

Intermittent HTN

The notation of hypertension may appear on or before June 30 of the measurement year, including prior to the measurement year. It does not matter if hypertension was treated or is currently being treated. The notation indicating a diagnosis of hypertension may be recorded in any of the following documents:

Problem list (this may include a diagnosis prior to June 30 of the measurement year or an undated diagnosis; see Note at the end of this section)

Office note

Subjective, Objective, Assessment, Plan (SOAP) note

Encounter form

Telephone call record

Diagnostic report

Hospital discharge summary

Statements such as “rule out HTN,” “possible HTN,” “white-coat HTN,” “questionable HTN” and “consistent with HTN” are not sufficient to confirm the diagnosis if such statements are the only notations of hypertension in the medical record.

If an organization cannot find the medical record, the patient remains in the measure denominator and is considered noncompliant for the numerator.

Flag to identify diabetes:

After the denominator is identified, assign each patient a flag to identity if the patient does or does not have diabetes as identified by claims/encounter and pharmacy data (see description below). The flag is used to determine the appropriate BP threshold to use during numerator assessment.

Assign a flag of diabetic to patients who were identified as diabetic using claims/encounter and pharmacy data. The organization must use both methods to identify patients with diabetes, but a patient only needs to be identified by one method.

Claim/encounter data:

-At least two outpatient visits (see Outpatient Value Set), observation visits (see Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (see Nonacute Inpatient Value Set) on different dates of service, with a diagnosis of diabetes (see Diabetes Value Set). Visit type need not be the same for the two visits.

-At least one acute inpatient encounter (see Acute Inpatient Value Set) with a diagnosis of diabetes (see Diabetes Value Set).

Pharmacy data:

-Patients who were dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year (see Table 1).

TABLE 1. PRESCRIPTIONS TO IDENTIFY PATIENTS WITH DIABETES

Alpha-glucosidase inhibitors:

Acarbose, Miglitol

Amylin analogs:

Pramlinitide

Antidiabetic combinations:

Glimepiride-pioglitazone, Glimepiride-rosiglitazone, Glipizide-metformin, Glyburide-metformin, Metformin-pioglitazone, Metformin-rosilitazone, Metformin-sitagliptin, Saxagliptin, Sitagliptin-simvastatin

Insulin:

Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin inhalation, Insulin isophane beef-pork, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin regular human, Insulin zinc human

Meglitinides:

Nateglinide, Repaglinide

Miscellaneous antidiabetic agents:

Exenatide, Liraglutide, Metformin-repaglinide, Sitagliptin

Sulfonylureas:

Acetohexamide, Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide

Thiazolidinediones:

Pioglitazone, Rosiglitazone

Assign a flag of not diabetic to patients who do not have a diagnosis of diabetes during the measurement year or year prior to the measurement year and who meet either of the following criteria:

- A diagnosis of polycystic ovaries (Polycystic Ovaries Value Set), in any setting, any time during the patient's history through December 31 of the measurement year.

- A diagnosis of gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Age: 18-75 years as of December 31 of the measurement year

Benefit: Medical

Continuous Enrollment: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the individual may not have more than a 1-month gap in coverage (i.e., an individual whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

All patients 18-75 years of age as of December 31 of the measurement year with a serious mental illness [see SMI Value Set] and diabetes (type 1 and type 2) [see Diabetes Value Set]

The following steps should be followed to identify patients with a serious mental illness and a diagnosis for diabetes:

(1) Identify Serious Mental Illness

Step 1: Identify Patients with a serious mental illness. They must meet at least one of the following criteria during the measurement year or the year prior:

At least one acute inpatient claim/encounter with any diagnosis of schizophrenia, bipolar I disorder, or major depression using any of the following code combinations:

- BH Stand Alone Acute Inpatient Value Set with one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
  - Major Depression Value Set
- BH Acute Inpatient Value Set with BH Acute Inpatient POS Value Set and one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
  - Major Depression Value Set

At least two visits in an outpatient, intensive outpatient, partial hospitalization, ED or non-acute inpatient setting, on different dates of service, with any diagnosis of schizophrenia or bipolar I disorder. Any two of the following code combinations meet criteria:

- BH Stand Alone Outpatient/PH/IOP Value Set with one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
- BH Outpatient/PH/IOP Value Set with BH Outpatient/PH/IOP POS Value Set and one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
- ED Value Set with one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
- BH ED Value Set with BH ED POS Value Set and one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
- BH Stand Alone Nonacute Inpatient Value Set with one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set
- BH Nonacute Inpatient Value Set with BH Nonacute Inpatient POS Value Set and one of the following diagnoses:
  - Schizophrenia Value Set
  - Bipolar Disorder Value Set

(2) Identify Diabetes

Step 2: Of the patients identified in Step 1, identify patients with diabetes (see Diabetes Value Set) during the measurement year or the year prior using the following data:

Claim/encounter data:

- At least two outpatient visits (see Outpatient Value Set), observation visits (see Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (see Nonacute Inpatient Value Set) on different dates of service, with a diagnosis of diabetes (see Diabetes Value Set). Visit type need not be the same for the two visits.
- At least one acute inpatient encounter (see Acute Inpatient Value Set) with a diagnosis of diabetes (see Diabetes Value Set).

Pharmacy data:

- Patients who were dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year (see Table 1)

Both methods to identify the eligible population should be used, however, an individual need only be identified by one to be included in the measure.

TABLE 1. PRESCRIPTIONS TO IDENTIFY PATIENTS WITH DIABETES

Alpha-glucosidase inhibitors:

Acarbose, Miglitol

Amylin analogs:

Pramlinitide

Antidiabetic combinations:

Glimepiride-pioglitazone, Glimepiride-rosiglitazone, Glipizide-metformin, Glyburide-metformin, Metformin-pioglitazone, Metformin-rosilitazone, Metformin-sitagliptin, Saxagliptin, Sitagliptin-simvastatin

Insulin:

Insulin aspart, Insulin aspart-insulin aspart protamine, Insulin detemir, Insulin glargine, Insulin glulisine, Insulin inhalation, Insulin isophane beef-pork, Insulin isophane human, Insulin isophane-insulin regular, Insulin lispro, Insulin lispro-insulin lispro protamine, Insulin regular human, Insulin zinc human

Meglitinides:

Nateglinide, Repaglinide

Miscellaneous antidiabetic agents:

Exenatide, Liraglutide, Metformin-repaglinide, Sitagliptin

Sulfonylureas:

Acetohexamide, Chlorpropamide, Glimepiride, Glipizide, Glyburide, Tolazamide, Tolbutamide

Thiazolidinediones:

Pioglitazone, Rosiglitazone

0729: Optimal Diabetes Care

Please also refer to all code lists included in the data dictionary attached in S.2b.

• 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period

• Patient had a diagnosis of diabetes (Diabetes Value Set) with any contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND the active problem list must be queried for diagnosis (Diabetes Value Set).

• At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period

Eligible specialties: Family Medicine, Internal Medicine, Geriatric Medicine, Endocrinology

Eligible providers: Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurses (APRN)

0076: Optimal Vascular Care

Please also refer to all code lists included in the data dictionary attached in S.2b.

Patients ages 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period who have a diagnosis of ischemic vascular disease (Ischemic Vascular Disease Value Set) with any contact during the current or prior measurement period OR had ischemic vascular disease (Ischemic Vascular Disease Value Set) present on an active problem list at any time during the measurement period.

Both contacts AND the active problem list must be queried for diagnosis (Ischemic Vascular Disease)

AND

At least one established patient office visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

Eligible Specialties:

Family Medicine, Internal Medicine, Geriatric Medicine, Cardiology

Eligible Providers:

Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurses (APRN)

Exclusions

0018: Controlling High Blood Pressure

This measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

Additionally, this measure excludes patients with evidence of end-stage renal disease, dialysis, nephrectomy, or kidney transplant on or prior to the December 31 of the measurement year. It also excludes female patients with a diagnosis of pregnancy during the measurement year, and patients who had a nonacute inpatient admission during the measurement year.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

This measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

Additionally, exclude patients who had a diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year and who did NOT have a diagnosis of diabetes. These patients are sometimes pulled into the denominator via pharmacy data. They are then removed once no additional diagnosis of diabetes (Type 1 or Type II) is found.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

All patients who meet one or more of the following criteria should be excluded from the measure:

- Evidence of end-stage renal disease (ESRD) or kidney transplant
- A diagnosis of pregnancy

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Patients who do not have a diagnosis of diabetes and meet one of the following criteria may be excluded from the measure:

-Patients with a diagnosis of polycystic ovaries.

-Patients with gestational or steroid-induced diabetes.

0729: Optimal Diabetes Care

Valid allowable exclusions include patients who were a permanent resident of a nursing home, pregnant, died or were in hospice or palliative care during the measurement year.

0076: Optimal Vascular Care

The following exclusions are allowed to be applied to the eligible population: permanent nursing home residents, receiving hospice or palliative care services, or died prior to the end of the measurement period.

Exclusion Details

0018: Controlling High Blood Pressure

ADMINISTRATIVE CLAIMS

Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the service began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data.

Exclude adults who meet any of the following criteria:

- Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following:

-- Enrolled in an Institutional SNP (I-SNP) any time during the measurement year.

-- Living long-term in an institution any time during the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run data of the file to determine if a patient had an LTI flag during the measurement year.

- Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Patients must meet BOTH of the following frailty and advanced illness criteria to be excluded:

1. At least one claim/encounter for frailty during the measurement year.

2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years):

-- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the discharge date for the stay.

-- At least one acute inpatient encounter with an advanced illness diagnosis.

-- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

-- A dispensed dementia medication.

DEMENTIA MEDICATIONS

DESCRIPTION / PRESCRIPTION

Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine

Miscellaneous central nervous system agents / Memantine

- Members 81 years of age and older as of December 31 of the measurement year (all product lines) with frailty during the measurement year.

Exclude patients with evidence of end-stage renal disease, dialysis, nephrectomy, or kidney transplant on or prior to December 31 of the measurement year, female patients with a diagnosis of pregnancy during the measurement year, and patients who had a nonacute inpatient admission during the measurement year. To identify nonacute inpatient admissions:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the admission date for the stay.

See attached code value sets.

MEDICAL RECORD REVIEW

Exclusionary evidence in the medical record must include a note indicating diagnosis of pregnancy or evidence of a nonacute inpatient admission during the measurement year, or evidence of ESRD, dialysis, nephrectomy or kidney transplant any time during the patient's history through December 31 of the measurement year.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

ADMINISTRATIVE CLAIMS

Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the service began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data.

Exclude adults who meet any of the following criteria:

- Medicare adults 66 years of age and older as of December 31 of the measurement year who meet either of the following:

-- Enrolled in an Institutional SNP (I-SNP) any time during the measurement year.

-- Living long-term in an institution any time during the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run data of the file to determine if a member had an LTI flag during the measurement year.

- Adults 66 years of age and older as of December 31 of the measurement year (all product lines) with frailty and with advanced illness. Patients must meet BOTH of the following frailty and advanced illness criteria to be excluded:

1. At least one claim/encounter for frailty during the measurement year.

2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years):

-- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters nonacute inpatient discharges on different dates of services, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the discharge date for the stay.

-- At least one acute inpatient encounter with an advanced illness diagnosis.

-- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

-- A dispensed dementia medication

DEMENTIA MEDICATIONS

DESCRIPTION / PRESCRIPTION

Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine

Miscellaneous central nervous system agents / Memantine

Exclude patients with gestational diabetes or steroid diabetes. Codes associated with identifying these identifying exclusions are attached in a separate file with code value sets.

See attached code value sets.

MEDICAL RECORD

Exclusionary evidence in the medical record must include a note indicating the patient did NOT have a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year AND had a diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year.

2602: Controlling High Blood Pressure for People with Serious Mental Illness

All patients who meet one or more of the following criteria may be excluded from the measure:

- All patients with evidence of end-stage renal disease (ESRD) (see ESRD Value Set; ESRD Obsolete Value Set) or kidney transplant (see Kidney Transplant Value Set) on or prior to December 31 of the measurement year. Documentation in the medical record must include a dated note indicating evidence of ESRD, kidney transplant or dialysis.
- All patients with a diagnosis of pregnancy (see Pregnancy Value Set) during the measurement year.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Patients who do not have a diagnosis of diabetes (see Diabetes Value Set), in any setting, during the measurement year or year prior to the measurement year and who meet either of the following criteria:

-A diagnosis of polycystic ovaries (see Polycystic Ovaries Value Set), in any setting, any time during the person's history through December 31 of the measurement year.

-A diagnosis of gestational diabetes or steroid-induced diabetes (see Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.

0729: Optimal Diabetes Care

• Patient was pregnant during measurement period (ICD-10 O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.311, O24.312, O24.313, O24.319, O24.32, O24.33, O24.811, O24.812, O24.813, O24.819, O24.82, O24.83, O24.911, O24.912, O24.913, O24.919, O24.92, O24.93

• Patient was a permanent nursing home resident during the measurement period

• Patient was in hospice or palliative care at any time during the measurement period,

• Patient died prior to the end of the measurement period

0076: Optimal Vascular Care

* Patient was a permanent nursing home resident at any time during the measurement period

* Patient was in hospice or receiving palliative care at any time during the measurement period

* Patient died prior to the end of the measurement period

Risk Adjustment

0018: Controlling High Blood Pressure

No risk adjustment or risk stratification

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

No risk adjustment or risk stratification

2602: Controlling High Blood Pressure for People with Serious Mental Illness

No risk adjustment or risk stratification

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

No risk adjustment or risk stratification

0729: Optimal Diabetes Care

Statistical risk model

0076: Optimal Vascular Care

Statistical risk model

Stratification

0018: Controlling High Blood Pressure

N/A

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

No stratification

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Not applicable.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Not applicable.

0729: Optimal Diabetes Care

The diabetes population is not currently stratified when publicly reported on our consumer website, MN HealthScores. The data is, however, stratified by public (MN Health Care Programs- Prepaid Medical Assistance including dual eligibles, MinnesotaCare, and General Assistance Medical Care) and private purchasers for our 2017 Health Care Disparities Report. This report notes a gap in outcomes of fifteen percentage points between diabetic patients in public programs and other purchasers. http://mncm.org/wp-content/uploads/2018/03/2017-Disparities-Report-FINAL-3.26.2018.pdf

0076: Optimal Vascular Care

The measure for the ischemic vascular disease population is not currently stratified when publicly reported on our consumer website, MN HealthScores. The data is, however, stratified by insurance product in our 2019 Health Care Disparities Reports by insurance type and race/ethnicity/language and country of origin.

https://mncm.org/wp-content/uploads/2019/04/mncm-disparities-report-by-insurance-2019.pdf

https://mncm.org/reports-and-websites/reports-and-data/health-equity-of-care-report/

These reports note gaps in outcomes for ischemic vascular disease patients in public programs versus other purchasers (6.6%) and disparities by race and ethnicity (as much as 12% for Black or African American and American Indian or Alaskan Natives)

Type Score

0018: Controlling High Blood Pressure

Rate/proportion better quality = higher score

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

Rate/proportion better quality = higher score

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Rate/proportion better quality = higher score

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Rate/proportion better quality = higher score

0729: Optimal Diabetes Care

Rate/proportion better quality = higher score

0076: Optimal Vascular Care

Ratio better quality = higher score

Algorithm

0018: Controlling High Blood Pressure

STEP 1: Determine the eligible population. To do so, identify adults who meet all specified criteria.

- AGES: 18-75 years as of December 31 of the measurement year.

- EVENT/DIAGNOSIS: Identify patients with hypertension in two ways: by claim/encounter data and by medical record data. SEE responses in S.6 and S.7 for eligible population and denominator criteria and details.

STEP 2: Exclude patients who meet the exclusion criteria. SEE responses in S.8 and S.9 for denominator exclusion criteria and details.

STEP 3: Determine the number of patients in the eligible population who had a blood pressure reading during the measurement year through the search of administrative data systems or medical record data.

STEP 4: Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record.

STEP 5: Determine whether the result was <140/90 mm Hg.

STEP 6: Calculate the rate by dividing the numerator (STEP 5) by the denominator (after exclusions) (STEP 2).

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

STEP 1: Determine the eligible population. To do so, identify patients who meet all the specified criteria.

- AGES: 18-75 years as of December 31 of the measurement year.

- EVENT/DIAGNOSIS: Identify patients with diabetes in two ways: by claim/encounter data and by pharmacy data. SEE S.6 and S.7 for eligible population and denominator criteria and details.

STEP 2: Exclude patients who meet the exclusion criteria. SEE S.8 and S.9 for denominator exclusion criteria and details.

STEP 3: Determine the number of patients in the eligible population who had a blood pressure reading during the measurement year through the search of administrative data systems or medical record data.

STEP 4: Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record.

STEP 5. Determine whether the result was <140/90 mm Hg.

STEP 6: Calculate the rate by dividing the numerator (STEP 5) by the denominator (after exclusions) (STEP 2).

2602: Controlling High Blood Pressure for People with Serious Mental Illness

Step 1: Identify patients with serious mental illness (schizophrenia, bipolar I disorder, and major depression).

Step 2: Identify patients from step 1 who also have a diagnosis of hypertension in claims and confirmed the hypertension diagnosis in medical records.

Step 3: Exclude patients who meet the exclusion criteria as specified in the “Denominator Exclusion Details” section. This is the denominator.

Step 4: Of those in the denominator, identify the lowest systolic and lowest diastolic BP reading from the most recent BP notation in the medical record.

Step 5: Calculate the rate by dividing the number of patients whose most recent blood pressure is adequately controlled by the denominator (after exclusions). 123834| 140881| 135810

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

Step 1: Identify patients with serious mental illness.

Step 2: Identify patients from step 1 who also have a diagnosis of diabetes during the measurement year or the year prior.

Step 3: Exclude patients who meet the exclusion criteria as specified in the "Denominator Exclusion Details" section.

Step 4: Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record.

Step 5. Determine whether the result was <140/90 mm Hg.

Step 6: Calculate the rate by dividing the numerator (Step 5) by the denominator (after exclusions) (Step 3). 123834| 140881| 135810

0729: Optimal Diabetes Care

This measure is calculated by submitting a file of individual patient values (e.g. blood pressure, A1c value, etc.) to a HIPAA secure data portal. Programming within the data portal determines if each patient is a numerator case and then a rate is calculated for each clinic site. Please also refer to the measure calculation algorithms submitted within the data dictionary for this measure.

If any component of the numerator is noncompliant for any one of the five components, then the patient is numerator noncompliant for the composite patient level all-or none optimal diabetes care measure.

Numerator logic is as follows:

A1c Component:

Is the HbA1c date in the measurement period? If no, is numerator noncompliant for this component. If yes, assess next variable.

Is the HbA1c value less than 8.0? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component.

Note: A1c needs to occur during the measurement year AND most recent value less than 8.0

Assess next component.

Blood Pressure Component:

Is Blood Pressure date in the measurement period? If no, is numerator noncompliant for this component. If yes, assess next variable.

BP Systolic < 140? If no, is numerator noncompliant for this component. If yes, assess next variable.

BP Diastolic < 90? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component.

Note: BP needs to occur during the measurement year AND most recent BP systolic less than 140 AND BP diastolic less than 90

Assess next component.

Cholesterol Statin Use Component:

Is the patient on a statin medication? If yes, and most recent date is in the measurement year, is numerator compliant for this component. If no, assess next variable.

For patients not on a statin the following variables are used to assess numerator compliance related to contraindications or exceptions to statin use:

Is the patient age 18 to 20? If yes, numerator compliant (free-pass), if no, assess next variable.

Is the patient age 21 to 75? Do they have ischemic vascular disease (IVD)?

If Yes IVD, is their most recent LDL in the last five years less than 40? If Yes, numerator compliant (free-pass), if no, assess next variable.

Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

If No IVD, is the patient age 21 to 39 and is their most recent LDL in the last 5 years greater than or equal to 190? If No, numerator compliant (free-pass).

If Yes LDL greater than or equal to 190, does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

If No IVD, no LDL greater than or equal to 190 for patients ages 40 to 70, is their most recent LDL in the last five years less than 70? If Yes, numerator compliant (free-pass), if no, assess next variable.

Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

Note: Patient is either on a statin (prescribed/ ordered) during the measurement year or has a valid exception either by age, presence or absence of ischemic vascular disease, low untreated LDL or valid contraindication/ exception.

Assess next component.

Tobacco-Free Component:

Is Tobacco Status = 1 (Tobacco Free) and Tobacco Assessment Date a valid date? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Assess next component.

Daily Aspirin/ Anti-platelet Component:

Does the patient have cardiovascular/ ischemic vascular disease? If no, is numerator compliant (free-pass), if yes assess next variable.

Is the patient on daily aspirin or an antiplatelet? If yes, and date of most recent aspirin/ anti-platelet is in the measurement year is numerator compliant, if no, assess next variable.

Does the patient have a valid contraindication/ exception to aspirin anti-platelet use defined as one of the following: anti-coagulant medication, history of gastrointestinal bleed, history of intracranial bleed, allergy, or physician documented reasons related to: risk of drug interaction, use of NSAIDS, uncontrolled HTN or gastro-intestinal reflux disease. If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

Note: Patients with ischemic vascular disease are either on daily aspirin (indicated/ prescribed/ ordered) or an anti-platelet prescribed/ ordered) during the measurement year or has a valid contraindication/ exception.

If all of the above numerator components are in compliance, then the patient calculated as a numerator case for the optimal diabetes care measure.

0076: Optimal Vascular Care

This measure is calculated by submitting a file of individual patient values (e.g. blood pressure, tobacco status, etc) to a HIPAA secure data portal. Programming within the data portal determines if each patient is a numerator case and then a rate is calculated for each clinic site. Please also refer to the measure calculation algorithms submitted within the data dictionary for this measure.

If any component of the numerator is noncompliant for any one of the four components, then the patient is numerator noncompliant for the composite patient level all-or none optimal vascular care measure.

Numerator logic is as follows:

Blood Pressure Component:

Is Blood Pressure date in the measurement year? If no, is numerator noncompliant for this component. If yes, assess next variable.

BP Systolic < 140? If no, is numerator noncompliant for this component. If yes, assess next variable.

BP Diastolic < 90? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component.

Note: BP needs to occur during the measurement year AND most recent BP systolic less than 140 AND BP diastolic less than 90

Assess next component.

Cholesterol Statin Use Component:

Is the patient on a statin medication? If yes, and most recent date is in the measurement year, is numerator compliant for this component. If no, assess next variable.

For patients not on a statin the following variables are used to assess numerator compliance related to contraindications or exceptions to statin use:

Is the patient age 18 to 20? If yes, numerator compliant (free-pass), if no, assess next variable.

Patients age 21 to 75. Is their most recent LDL in the last five years less than 40? If Yes, numerator compliant (free-pass), if no, assess next variable.

Does the patient have a valid contraindication/ exception to statin use defined as one of the following: pregnancy, active liver disease, rhabdomyolysis, ends stage renal disease on dialysis, heart failure, breastfeeding, allergy to statin, drug-drug interaction with statin, or intolerance with documentation of trying a statin at least once in the last 5 years)? If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

Note: Patient is either on a statin (prescribed/ ordered) during the measurement year or has a valid exception either by age, presence or absence of ischemic vascular disease, low untreated LDL or valid contraindication/ exception.

Assess next component.

Tobacco-Free Component:

Is Tobacco Status = 1 (Tobacco Free) and Tobacco Assessment Date a valid date? If yes, is numerator compliant for this component. If no, is numerator noncompliant for this component. Assess next component.

Daily Aspirin/ Anti-platelet Component:

Is the patient on daily aspirin or an antiplatelet? If yes, and date of most recent aspirin/ anti-platelet is in the measurement year is numerator compliant, if no, assess next variable.

Does the patient have a valid contraindication/ exception to aspirin anti-platelet use defined as one of the following: anti-coagulant medication, history of gastrointestinal bleed, history of intracranial bleed, allergy, or physician documented reasons related to: risk of drug interaction, use of NSAIDS, uncontrolled HTN or gastro-intestinal reflux disease. If yes, is numerator compliant for this component. If no, fail this numerator component and remains in the denominator.

Note: Patients are either on daily aspirin (indicated/ prescribed/ ordered) or an anti-platelet prescribed/ ordered) during the measurement year or has a valid contraindication/ exception.

If all of the above numerator components are in compliance, then the patient calculated as a numerator case for the optimal vascular care measure.

Submission items

0018: Controlling High Blood Pressure

5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

2602 : Controlling High Blood Pressure for People with Serious Mental Illness

2606 : Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: There are several related measures that assess blood pressure control but are either focused on different population, use different data sources or are specified at different levels of accountability than NQF 0018. Measure 0061 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level is <140/90 mm Hg. Measure 2602 is NQF endorsed as a single measure that uses health plan reported data to assess the

percentage of patients 18-85 years of age with serious mental illness who had a diagnosis of hypertension and whose blood pressure was adequately controlled during the measurement year. Measure 2606 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with a serious mental illness and diabetes (type 1 and type 2) whose most recent blood pressure reading during the measurement year is <140/90 mm Hg. Measure 0076 is NQF endorsed as a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult ischemic vascular disease patients, 18-75 years of age, who have optimally managed modifiable risk factors including blood pressure and three other indicators. Measure 0729 is NQF endorsed as a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult diabetes patients, 18-75 years of age, who have optimally managed modifiable risk factors including blood pressure and four other indicators. HARMONIZED MEASURE ELEMENTS: All measures described above focus on a blood pressure target of <140/90 mm Hg. UNHARMONIZED MEASURE ELEMENTS: - Data Source and Level of Accountability: Measures 0018, 0061, 2602, and 2606 are collected through administrative claims and/or medical record review using health plan reported data. Measures 0076 and 0729 are collected through medical record abstraction and reported at the physician level of accountability. - Population Focus: Measure 0018 is focused on the general population of people with hypertension while the other measures focus on either diabetes, serious mental illness with diabetes, or serious mental illness with hypertension. - Age Range: Measures 0018 and 2602 focus on adults 18-85 while the other measures focus on adults 18-75. IMPACT ON INTERPRETABILITY?AND DATA COLLECTION BURDEN:? The differences between measures 0018, 0061, 2602, and 2606 do not have an impact on interpretability of?publicly?reported rates or an impact on data collection burden as the measures are focused on different populations. The differences between 0018, 0076, and 0729 also do not have an impact on interpretability of publicly reported rates or an impact on data collection burden because the data for each measure is collected from different data sources by different entities.

5b.1 If competing, why superior or rationale for additive value: NA

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

5.1 Identified measures:

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0061 is NQF endorsed as a single measure that uses health plan reported data to assess the percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent blood pressure level is <140/90 mm Hg. Measure 0729 is a composite measure (all or nothing) that uses physician reported data to assess the percentage of adult diabetes patients who have optimally managed modifiable risk factors including blood pressure and four other indicators. NCQA's measure 0061 is included with five other NCQA diabetes measures. The five other diabetes measures are individually NQF endorsed (Endocrine Maintenance Phase 1). Together, the six NCQA individual diabetes measures (including measure 0061) make a set of diabetes HEDIS measures but are not considered all or nothing. NCQA uses individual measures to provide health plans and others the opportunity to measure, report and incentivize each aspect of quality care for the diabetes population. HARMONIZED MEASURE ELEMENTS: Measures 0061 and 0729 both focus on an adult patient population 18-75 years of age with diabetes (type 1 and type 2). Both

measures assess whether the patient's most recent blood pressure level in the measurement period was <140/90 mm Hg. Both measures also specify denominator visit criteria to include patients with at least two outpatient visits in the last two years with a diagnosis of diabetes. UNHARMONIZED MEASURE ELEMENTS: - Data Source: Measure 0061 is collected through administrative claims and/or medical record. Measure 0729 is collected through medical record abstraction. - Level of Accountability: Measure 0061 is a health plan level measure and is used in NCQA's clinical quality and recognition programs (See 4.1 Usability and Use). Measure 0729 is a physician level measure. - Data Elements: Measure 0061 uses two methods to identify patients in the denominator 1) claims/encounter data with a diagnosis of diabetes and 2) pharmacy data for insulin or hypoglycemic/antihyperglycemics (see S.7 Denominator Details). Measure 0729 uses encounter data with a diagnosis for diabetes to identify patients in the denominator. NCQA uses two identification methods to ensure that only patients with diagnosed diabetes are included in the denominator. - Exclusions: Exclusions for measures 0061 and 0729 are substantially aligned with some variation due to differences in health plan and clinician level reporting. IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN: The differences between these measures do not have an impact on interpretability of publicly reported rates. There is no added burden of data collection because the data for each measure is collected from different data sources by different entities.

5b.1 If competing, why superior or rationale for additive value: N/A

2602: Controlling High Blood Pressure for People with Serious Mental Illness

5.1 Identified measures: 0018 : Controlling High Blood Pressure

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: This measure was adapted from the existing measure (Controlling High Blood Pressure NQF #0018) for the subpopulation of people with serious mental illness who have a higher risk of disease and for whom there is evidence of disparity in treatment compared to the general population. The numerator of this measure is consistent with the measure used for the general population while the denominator has been adapted to facilitate an adequate number of individuals with serious mental illness. NCQA is the owner and steward of the existing NQF-endorsed measure and the specifications are harmonized. Building on this existing measure helps to reduce the burden of implementation for organizations and to align incentives for providers and organizations to focus on key quality of care issues. Note: The specifications for the existing measure (Controlling High Blood Pressure NQF #0018) have been updated based on 2013 JNC-8 guidelines. NCQA will submit the revised specification for Controlling High Blood Pressure NQF #0018 in the 4th quarter 2014 during NQF's scheduled measure update period. This measure uses the new specification to be consistent with the current guideline.

5b.1 If competing, why superior or rationale for additive value: Not applicable.

2606: Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)

5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: This measure was adapted from the existing measure (Comprehensive Diabetes Care: Blood Pressure Control <140/90 mm Hg NQF #0061) for the subpopulation of people with serious mental illness who have a higher risk of disease and for whom there is evidence of disparity in treatment compared to the general population. The numerator of this measure is consistent with the measure used for the general population while the denominator has been adapted to focus on individuals with serious mental illness. NCQA is the current owner and steward of the existing NQF-endorsed measure and the specifications are harmonized. Building on this existing measure helps to reduce the burden of implementation for organizations and to align incentives for providers and organizations to focus on key quality of care issues.

5b.1 If competing, why superior or rationale for additive value: Not applicable.

0729: Optimal Diabetes Care

5.1 Identified measures: 0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

0545 : Adherence to Statins for Individuals with Diabetes Mellitus

0575 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)

2712 : Statin Use in Persons with Diabetes

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: Denominator differences due to data source, different composite measure construct and philosophical beliefs of our measure development work group. Please see 5b.1.

5b.1 If competing, why superior or rationale for additive value: 2 measures are part of a composite measure that is stewarded by NCQA.

0061: Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)

0575: Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)

NCQA's composite is a different measure construct; it is calculated at the physician panel level (what percentage of my patients have an A1c < 8.0, what percentage had BP < 140/90) but is not a patient level composite. MNCM believes that its patient level all-or-none composite is superior, patient-centric (not provider centric) and individual patients achieving as many health targets as possible only increases their likelihood of reducing long term microvascular and macrovascular complication of diabetes.

These two measure's numerators are harmonized.

We have philosophical differences in the denominator definitions and this is due in part to the data source. NCQA uses claims data to identify diabetic patients, MNCM used EMR based data. NCQA's methodology looks for diabetes diagnosis codes but additionally will include patients on oral medications and insulin who do not have the diagnosis. We also believe that is important to exclude diabetic women who are currently pregnant during the measurement year, related to cholesterol management. NCQA's denominator value sets intentionally include these patients.

This measure is related (but not exactly the same)

0545: Adherence to Statins for Individuals with Diabetes Mellitus (CMS)

Uses the same denominator definition as the NCQA composite. From information available in QPS, it does not appear that there are exceptions to this measure related to liver disease, rhabdomyolysis, pregnancy, etc. This is different from our planned cholesterol

component for statin use. We believe our cholesterol component is superior in that it takes into account patient safety.

This measure is related (but not exactly the same)

2712: Statin Use in Persons with Diabetes (PQA)

This measure uses a different data source; pharmacy claims. Because the data source relies on filled prescriptions, the only way to identify the denominator is if the patient is on a diabetes drug, which does not encompass all diabetic patients that should be on a statin. Exclusions for this measure do not take into account the exceptions and contraindications for use of statins. We believe our cholesterol component is superior.

0076: Optimal Vascular Care

5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy

0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease

0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet

0073 : Ischemic Vascular Disease (IVD): Blood Pressure Control

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: There are some differences noted in the denominator definitions, source data and settings of care. #0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet AND #0073 Ischemic Vascular Disease (IVD): Blood Pressure Control are most closely related to the components of our measure, however this measure focuses on the inpatient setting and only patients discharged with acute myocardial infarction, coronary bypass graft or percutaneous coronary interventions. #0067 Chronic Stable Coronary Artery Disease: Antiplatelet Therapy focuses only on patients with coronary artery disease; however from specifications available through QPS not able to compare diagnosis code definitions. This measure, #0076 Optimal Vascular Care is more inclusive with a denominator definition of ischemic vascular disease (atherosclerosis of coronary and peripheral arteries) #0543 Adherence to statin therapy for individuals with cardiovascular disease. This medication claims based measure's denominator is more aligned with our intent (coronary, cerebrovascular and peripheral artery disease), however endorsement was removed in 2015.

5b.1 If competing, why superior or rationale for additive value: There are other similar measures that address three of the four components separately, but no currently endorsed measure exists that is a patient level all-or-none composite measure.

0076 Optimal Vascular Care is superior to the newly submitted measure for consideration because its measure construct additionally includes:

* contraindications and exceptions to statin use

* risk adjustment; actual and expected rates reported

* allowable exclusions for potentially frail older adults age 65 to 75 (hospice or palliative services, nursing home, death)

Comparison of NQF 0071 and NQF 0070

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Steward

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

National Committee for Quality Assurance

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

PCPI Foundation

Description

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

The percentage of patient's 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy

Type

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Outcome: Intermediate Clinical Outcome

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Process

Data Source

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Claims This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system.

No data collection instrument provided Attachment 0071_PBH_Value_Sets_Fall_2019-637091548789757231.xlsx

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Registry Data Not applicable.

No data collection instrument provided Attachment NQF0070_I9toI10_conversion-636904075196450947.xlsx

Level

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Health Plan

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Clinician : Group/Practice, Clinician : Individual

Setting

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Outpatient Services

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Home Care, Other, Outpatient Services, Post-Acute Care Nursing Facility Visit, Care Services in Long-Term Residential Facility

Numerator Statement

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients who received at least 135 days of treatment with beta-blockers during the 180-day measurement interval.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Patients who were prescribed beta-blocker therapy

Numerator Details

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

At least 135 days of treatment with beta-blockers during the 180-day measurement interval.

180-day measurement interval – The 180-day period that includes the discharge date and the 179 days after discharge.

To determine continuity of treatment during the 180-day period, identify all prescriptions filled within the 180-day measurement interval, and add the number of allowed gap days (up to a total of 45 days) to the number of treatment days for a maximum of 180 days (i.e., 135 treatment days + 45 gap days = 180 days).

Treatment days (days covered) – The actual number of calendar days covered with prescriptions within the specified 180-day measurement interval (i.e., a prescription of a 90-day supply dispensed on the 100th day will have 80 days counted in the 180-day interval).

Assess for active prescriptions and include days supply that fall within the 180-day measurement interval. For patients who were on beta-blockers prior to admission and those who were dispensed an ambulatory prescription during their inpatient stay, factor those prescriptions into adherence rates if the actual treatment days fall within the 180-day measurement interval.

PBH-B BETA-BLOCKER MEDICATIONS

DESCRIPTION / PRESCRIPTION

Noncardioselective beta-blockers / Carvedilol; Labetalol; Nadolo; Penbutolol; Pindolol; Propranolol; Timolol; Sotalol

Cardioselective beta-blockers / Acebutolol; Atenolol; Betaxolol; Bisoprolol; Metoprolol; Nebivolol

Antihypertensive combinations / Atenolol-chlorthalidone; Bendroflumethiazide-nadolol; Bisoprolol-hydrochlorothiazide; Hydrochlorothiazide-metoprolol; Hydrochlorothiazide-propranolol

See attached code value sets.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: At least once during the measurement period

Definition:

Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list.

Beta-blocker therapy:

- For patients with prior LVEF <40%, beta-blocker therapy includes the following: bisoprolol, carvedilol, or sustained release metoprolol succinate.

- For patients with prior MI, beta-blocker therapy includes any agent within the beta-blocker drug class. As of 2015, no recommendations or evidence are cited in current stable ischemic heart disease guidelines for preferential use of specific agents.

Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of CAD or history of cardiac surgery proxy is documented.

For Submission Criteria 1, report Quality Data Code, G9189: Beta-blocker therapy prescribed or currently being taken

For Submission Criteria 2, report CPT Category II Code, 4008F: Beta-blocker therapy prescribed or currently being taken

Denominator Statement

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior (within the past 3 years) MI or a current or prior LVEF < 40%

Denominator Details

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients who had continuous enrollment from discharge date through 179 days after discharge. No more than one gap in continuous enrollment of up to 45 days within the 180 days of the event. If the patient has Medicaid, then no more than a 1-month gap in coverage.

An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.

To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

If a patient has more than one episode of AMI that meets the event/diagnosis criteria, from July 1 of the year prior to the measurement year through June 30 of the measurement year, include only the first discharge.

Direct transfers to an acute inpatient care setting: If a patient had a direct transfer to an acute inpatient setting (for any diagnosis), use the discharge date from the transfer setting, not the initial discharge. Exclude both the initial discharge and the direct transfer discharge if the transfer discharge occurs after June 30 of the measurement year. Use the instructions below to identify direct transfers and exclude nonacute inpatient stays.

Direct transfers to a nonacute inpatient care setting: Exclude from the denominator, hospitalizations in which the patient had a direct transfer to a nonacute inpatient care setting for any diagnosis. Use the instructions below to identify direct transfers and confirm the stay was for nonacute inpatient care based on the presence of a nonacute code on the claim.

A direct transfer is when the discharge date from the first inpatient setting precedes the admission date to a second inpatient setting by one calendar day or less. For example:

- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 1, is a direct transfer.

- An inpatient discharge on June 1, followed by an admission to an inpatient setting on June 2, is a direct transfer.

- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 3, is not a direct transfer; these are two distinct inpatient stays.

Use the following method to identify admissions to and discharges from inpatient settings.

1. Identify all acute and nonacute inpatient stays.

2. If needed, identify nonacute inpatient stays.

3. Identify the admission and discharge dates for the stay.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: 12 consecutive months

Denominator Note:

The history of cardiac surgery serves as a proxy for a diagnosis of CAD; a diagnosis is not needed if the patient has documented history of cardiac surgery. Only one of the two criteria – a diagnosis of CAD or history of cardiac surgery proxy – is required. To meet the denominator criteria, a patient must have an active diagnosis of CAD (or proxy documented) at the time of the encounter which is used to qualify for the denominator and evaluate the numerator.

The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient meets the CAD diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action. If the patient meets the proxy of a history of cardiac surgery inclusion criterion, there should be documentation of the proxy at the encounter being evaluated for the numerator action.

Prior Myocardial Infarction (MI) – for Submission Criteria 2, prior MI is limited to those occurring within the past 3 years.

Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%)

Patients aged >= 18 years on date of encounter

AND

Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

OR

History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996

AND

Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITH OR WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

Left ventricular ejection fraction (LVEF) < 40%: G8694

Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction

Patients aged >= 18 years on date of encounter

AND

Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

OR

History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996

AND

Diagnosis for myocardial infarction– includes patient that had a prior (within the past 3 years) myocardial infarction (ICD-10-CM): I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.0, I22.1, I22.2, I22.8, I22.9, I24.1, I25.2

AND

Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITH OR WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

Exclusions

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria:

- Asthma
- COPD
- Obstructive chronic bronchitis
- Chronic respiratory conditions due to fumes and vapors
- Hypotension, heart block >1 degree or sinus bradycardia

- A medication dispensing event indicative of a history of asthma

- Intolerance or allergy to beta-blocker therapy

Additionally, this measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Denominator Exceptions:

Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerance, other medical reasons).

Documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons).

Documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system).

Exclusion Details

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients identified as having an intolerance or allergy to beta-blocker therapy. Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria:

- Asthma

- COPD

- Obstructive chronic bronchitis

- Chronic respiratory conditions due to fumes and vapors

- Hypotension, heart block >1 degree or sinus bradycardia

- A medication dispensing event indicative of a history of asthma

MEDICATIONS TO IDENTIFY HISTORY OF ASTHMA

DESCRIPTION / PRESCRIPTION

Bronchodilator combinations / Budesonide-formoterol; Fluticasone-vilantero; Fluticasone-salmeterol; Formoterol-mometasone

Inhaled corticosteroids / Beclomethasone; Budesonide; Ciclesonide; Flunisolide; Fluticasone; Mometasone

Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the services began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data.

Exclude adults who meet any of the following criteria:

- Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following:

-- Enrolled in an Institutional SNP (I-SNP) any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

-- Living long-term in an institution any time on or between July 1 of the year prior to the measurement year and the end of the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run date of the file to determine if an adult had an LTI flag any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

- Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Adults must meet BOTH of the following frailty and advanced illness criteria to be excluded:

1. At least one claim/encounter for frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years):

-- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the discharge date for the stay.

-- At least one acute inpatient encounter with an advanced illness diagnosis.

-- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

-- A dispensed dementia medication.

DEMENTIA MEDICATIONS

DESCRIPTION / PRESCRIPTION

Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine

Miscellaneous central nervous system agents / Memantine

- Members 81 years of age and older as of December 31 of the measurement year (all product lines) with frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

See attached code value sets.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: During the encounter within the 12-month period

Exceptions are used to remove a patien

t from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions

are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) (eg, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities.

Additional details are as follows:

For Submission Criteria 1 –

Report Quality Data Code, G9190: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons).

Report Quality Data Code, G9191: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons).

Report Quality Data Code, G9192: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).

For Submission Criteria 2 –

Append a modifier to CPT Category II Code:

4008F-1P: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons).

4008F-2P: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons).

4008F-3P: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).

Risk Adjustment

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

No risk adjustment or risk stratification

116000| 123834| 140881

116000| 123834| 140881

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

No risk adjustment or risk stratification

140560| 135810| 117446

140560| 135810| 117446

Stratification

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

No stratification

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Consistent with CMS' Measures Management System Blueprint and national recommendations put forth by the IOM (now NASEM) and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.

Type Score

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Rate/proportion better quality = higher score

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Rate/proportion better quality = higher score

Algorithm

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

STEP 1: Determine the eligible population. To do so, identify patients who meet all specified criteria.

- AGES: 18 years and older as of December 31 of the measurement year.

- EVENT/DIAGNOSIS: Identify patients who were discharged from an acute setting with an AMI from July 1 of the year prior to the measurement year through June 30 of the measurement year. SEE S.6 and S.7 for eligible population and denominator criteria and details.

STEP 2: Exclude patients who meet the exclusions criteria. SEE S.8 and S.9 for denominator exclusion criteria and details.

STEP 3: Determine the number of patients in the eligible population who were given a 180-day course of treatment with beta blockers post discharge.

STEP 4: Identify patients whose dispensed days' supply is >=135 days in the 180-day measurement interval. SEE S.4 and S.5 for numerator criteria and details.

STEP 5: Calculate the rate by dividing the numerator (STEP 4) by the denominator (after exclusions) (STEP 2). 116000| 123834| 140881

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

This measure is comprised of two submission criteria but is intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows:

Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)]

Calculation algorithm for Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%)

1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (e.g., other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm for Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction

1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated

and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. 140560| 135810| 117446

Submission items

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

5.1 Identified measures: 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1

5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2

NCQA's current Persistence of Beta Blocker Treatment After a Heart Attack measure (NQF measure 0071) uses health plan-reported data to assess the percentage of patients 18 years of age and older during the measurement year who were discharged with a diagnosis of AMI during the 6 months prior to the beginning of the measurement year through the 6 months after the beginning of the measurement year and who received persistent beta-blocker treatment for six months after discharge.

RELATED NQF MEASURE 0070 (Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)):

This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current left ventricular ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy.

HARMONIZED MEASURE ELEMENTS:

Measure 0071 and 0070 focus on patients 18 years and older who are prescribed beta-blocker treatment post-discharge after having a MI or history of MI. The National Quality Strategy Priorities classification for both measures is Prevention and Treatment of Cardiovascular Disease. Both measures exclude patients who are allergic or have an intolerance to beta blockers.

DIFFERENCES:

Below are the unharmonized measure elements between measure 0071 and measure 0070:

Measure 0071 focuses on beta-blocker treatment post a MI and Measure 0070 focuses on patients who have a prior MI or a current or prior LVEF <40%.

- Data Source: Data for measure 0071 is collected through administrative claims, electronic clinical data, and pharmacy data, while data for measure 0070 is collected through medical record, electronic health record data, electronic clinical data, and paper records

- Level of Accountability: Measure 0071 is a health plan level measure while measure 0070 is a clinician-level measure.

- Population: Measure 0071 focuses on patients who were diagnosed with a MI and discharged and prescribed a beta-blocker therapy treatment. Measure 0070 focuses on

patients in a measurement year with a diagnosis of coronary artery diseases who also have a prior MI or current or prior LVEF.

- Exclusions: The difference in exclusions is that measure 0071 specifies asthma, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes and vapors, hypotension, hear block >1 degree, sinus bradycardia, and medication dispensing events indicative of a history of asthma as exclusions. Additionally, measure 0071 excludes hospitalizations in which the patient was transferred directly to a nonacute care facility for any diagnosis, patients enrolled in an I-SNP, patients living long-term in an institution, patients 66-80 years of age with frailty and advanced illness, and patients 81 years of age and older with frailty. Measure 0070 exclusions include: documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons) and documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system).

IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN:

The differences between measures 0071 and 0070 do not have an impact on interpretability of publicly reported rates, or the burden of data collection, because all data for both measures are collected from different data sources by different entities.

ANSWER FOR SECTION 5b.1

Our current measure has a long-standing history of use by health plans and has been implemented for nearly 15 years.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

5.1 Identified measures: 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0117 : Beta Blockade at Discharge

0127 : Preoperative Beta Blockade

0071 : Persistence of Beta-Blocker Treatment After a Heart Attack

0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0083e : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0070 addresses a patient population of patients with CAD and either a recent prior MI or LVSD. This patient population is also covered in part by the following NQF-endorsed measures: NQF 0071: Persistence of Beta-Blocker Treatment After a Heart Attack and NQF 0083 and 0083e: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD). The specifications are harmonized to the extent possible. As a result, the denominator specifications for the measures differ where needed based on the differing patient populations. Additionally, NQF 0071 is intended for use at the health plan level. NQF 0117 is an inpatient/hospital level measure and includes only patients who have undergone isolated CABG surgery. NQF 0127 is also an inpatient/hospital level measure that focuses on administration of beta-blockers prior to isolated CABG surgery. Measure 0070e is the EHR version of this measure and is completely harmonized.

5b.1 If competing, why superior or rationale for additive value:

Comparison of NQF 0965, NQF 0066, NQF 0070, NQF 0071, and NQF 0081

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients
0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)
0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)
0071: Persistence of Beta-Blocker Treatment After a Heart Attack
0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Steward

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

American College of Cardiology

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

American Heart Association/American Stroke Association

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

PCPI Foundation

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

National Committee for Quality Assurance

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

PCPI Foundation

Description

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge.

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have diabetes OR a current or prior Left Ventricular Ejection Fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB therapy

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

The percentage of patient's 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

Type

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Composite

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Process

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Process

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Outcome: Intermediate Clinical Outcome

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Process

Data Source

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Registry Data National Cardiovascular Data Registry (NCDR) ICD Registry

Available in attached appendix at A.1 Attachment icd_v2_codersdatadictionary_2-2-637061353934779116-637088191497113357.pdf

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Registry Data This measure is currently being used in the ACCF PINNACLE registry for the outpatient office setting

No data collection instrument provided Attachment NQF0066__I9toI10_conversion-637065936225258259.xlsx

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Registry Data Not applicable.

No data collection instrument provided Attachment NQF0070_I9toI10_conversion-636904075196450947.xlsx

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Claims This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from health plans via NCQA's online data submission system.

No data collection instrument provided Attachment 0071_PBH_Value_Sets_Fall_2019-637091548789757231.xlsx

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Registry Data Not applicable

No data collection instrument provided Attachment NQF0081_I9toI10_conversion_2019Apr09.xlsx

Level

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Facility

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Clinician : Group/Practice, Clinician : Individual

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Clinician : Group/Practice, Clinician : Individual

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Health Plan

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Clinician : Group/Practice, Clinician : Individual

Setting

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Inpatient/Hospital

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Home Care, Outpatient Services, Post-Acute Care

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Home Care, Other, Outpatient Services, Post-Acute Care Nursing Facility Visit, Care Services in Long-Term Residential Facility

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Outpatient Services

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility

Numerator Statement

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Generator patients who receive all medications for which they are eligible:

1. ACE/ARB prescribed at discharge (if eligible for ACE/ARB as described in denominator) AND
2. Beta blockers prescribed at discharge (if eligible for beta blockers as described in denominator)

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Patients who were prescribed ACE inhibitor or ARB therapy

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Patients who were prescribed beta-blocker therapy

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients who received at least 135 days of treatment with beta-blockers during the 180-day measurement interval.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Patients who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

Numerator Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

If eligible for ACE/ARB and given, then code “Yes”

If eligible for ACE/ARB but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for ACE/ARB and not given, then code “No, no reason”

If eligible for beta blocker and given, then code “Yes”

If eligible for beta blocker but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for beta blocker and not given, then code “No, no reason”

If any “No, no reason” present, then performance not met. Else, performance met.

Note: Contraindicated and those participating in blinded studies are considered performance met. There are technically no exclusions or exceptions that would remove patients from the denominator.

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Numerator Definition:

Prescribed – May include prescription given to the patient for ACE inhibitor or ARB therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB therapy as documented in current medication list.

FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40%

Report Quality Data Code G8935: Clinician prescribed angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy

FOR POPULATION 2: Patients who are 18 years and older with a diagnosis of CAD who have diabetes

Report Quality Data Code G8473: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy prescribed

Note: For reporting, the two populations are combined for a single reported performance score on the combined measure population. If a patient has both diabetes and LVSD, reporting criteria #2 (CAD with diabetes) will count as appropriate reporting for this patient.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: At least once during the measurement period

Definition:

Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list.

Beta-blocker therapy:

- For patients with prior LVEF <40%, beta-blocker therapy includes the following: bisoprolol, carvedilol, or sustained release metoprolol succinate.

- For patients with prior MI, beta-blocker therapy includes any agent within the beta-blocker drug class. As of 2015, no recommendations or evidence are cited in current stable ischemic heart disease guidelines for preferential use of specific agents.

Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of CAD or history of cardiac surgery proxy is documented.

For Submission Criteria 1, report Quality Data Code, G9189: Beta-blocker therapy prescribed or currently being taken

For Submission Criteria 2, report CPT Category II Code, 4008F: Beta-blocker therapy prescribed or currently being taken

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

At least 135 days of treatment with beta-blockers during the 180-day measurement interval.

180-day measurement interval – The 180-day period that includes the discharge date and the 179 days after discharge.

To determine continuity of treatment during the 180-day period, identify all prescriptions filled within the 180-day measurement interval, and add the number of allowed gap days (up to a total of 45 days) to the number of treatment days for a maximum of 180 days (i.e., 135 treatment days + 45 gap days = 180 days).

Treatment days (days covered) – The actual number of calendar days covered with prescriptions within the specified 180-day measurement interval (i.e., a prescription of a 90-day supply dispensed on the 100th day will have 80 days counted in the 180-day interval).

Assess for active prescriptions and include days supply that fall within the 180-day measurement interval. For patients who were on beta-blockers prior to admission and those who were dispensed an ambulatory prescription during their inpatient stay, factor those prescriptions into adherence rates if the actual treatment days fall within the 180-day measurement interval.

PBH-B BETA-BLOCKER MEDICATIONS

DESCRIPTION / PRESCRIPTION

Noncardioselective beta-blockers / Carvedilol; Labetalol; Nadolo; Penbutolol; Pindolol; Propranolol; Timolol; Sotalol

Cardioselective beta-blockers / Acebutolol; Atenolol; Betaxolol; Bisoprolol; Metoprolol; Nebivolol

Antihypertensive combinations / Atenolol-chlorthalidone; Bendroflumethiazide-nadolol; Bisoprolol-hydrochlorothiazide; Hydrochlorothiazide-metoprolol; Hydrochlorothiazide-propranolol

See attached code value sets.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge

Definition:

Prescribed-Outpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB or ARNI therapy as documented in current medication list.

Prescribed-Inpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at discharge OR ACE inhibitor or ARB or ARNI therapy to be continued after discharge as documented in the discharge medication list.

Numerator Note:

To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of heart failure is documented. Eligible clinicians who have given a prescription for or whose patient is already taking an Angiotensin-Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor Blocker (ARB) would meet performance for this measure. Other combination therapies that consist of an ACEI plus diuretic, ARB + neprilysin inhibitor (ARNI), ARB plus diuretic, ACEI plus calcium channel blocker, ARB plus calcium channel blocker, or ARB plus calcium channel blocker plus diuretic would also meet performance for this measure.

For Submission Criteria 1 and Submission Criteria 2, report CPT Category II Code, 4010F: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy prescribed or currently being taken

(NOTE to NQF: Based on the language revision, PCPI is requesting updated coding and descriptor.)

Denominator Statement

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

All generator patients surviving hospitalization who are eligible to receive either an ACE/ARB or beta blocker at discharge.

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have diabetes OR current or prior LVEF <40%

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior (within the past 3 years) MI or a current or prior LVEF < 40%

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40%

Denominator Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

All generator patients surviving hospitalization who are eligible to receive any one of the two medication classes:

1) ACE/ARB: Patients who have an ejection fraction (EF) of <40%

OR

2) Beta blockers:

Patients have either:

a. EF of <40% AND/OR

b. Previous myocardial infarction (MI)

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40%

Denominator Definition:

LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction.

Patients aged >= 18 years

AND

Diagnosis for coronary artery disease (ICD-9-CM) [reportable through 9/30/2015]: 410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.1, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.8, 414.9, V45.81, V45.82

Diagnosis for coronary artery disease (ICD-10-CM) [reportable beginning 10/01/2015]: I20.0, I20.1, I20.8, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I22.0, I22.1, I22.2, I22.8, I22.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750,

I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

AND

Patient encounter during the reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

AND

Two Denominator Eligible Visits

AND

Report Quality Data Code: G8934: Left Ventricular Ejection Fraction (LVEF) < 40% or documentation of moderately or severely depressed left ventricular systolic function

FOR POPULATION 2: Patients who are 18 years and older with a diagnosis of CAD who have diabetes

Patients aged >= 18 years

AND

Diagnosis for coronary artery disease (ICD-9-CM) [reportable through 9/30/2015]: 410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.1, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.8, 414.9, V45.81, V45.82

Diagnosis for coronary artery disease (ICD-10-CM) [reportable beginning 10/01/2015]: I20.0, I20.1, I20.8, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I22.0, I22.1, I22.2, I22.8, I22.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

AND

Diagnosis for diabetes (ICD-9-CM) [reportable through 9/30/2015]: 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93

Diagnosis for diabetes (ICD-10-CM) [reportable beginning 10/01/2015]: E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E10.36, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351,

E13.359, E13.36, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9

AND

Patient encounter during the reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

AND

Two Denominator Eligible Visits

Note: For reporting, the two populations are combined for a single reported performance score on the combined measure population. If a patient has both diabetes and LVSD, reporting criteria #2 (CAD with diabetes) will count as appropriate reporting for this patient.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: 12 consecutive months

Denominator Note:

The history of cardiac surgery serves as a proxy for a diagnosis of CAD; a diagnosis is not needed if the patient has documented history of cardiac surgery. Only one of the two criteria – a diagnosis of CAD or history of cardiac surgery proxy – is required. To meet the denominator criteria, a patient must have an active diagnosis of CAD (or proxy documented) at the time of the encounter which is used to qualify for the denominator and evaluate the numerator.

The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient meets the CAD diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action. If the patient meets the proxy of a history of cardiac surgery inclusion criterion, there should be documentation of the proxy at the encounter being evaluated for the numerator action.

Prior Myocardial Infarction (MI) – for Submission Criteria 2, prior MI is limited to those occurring within the past 3 years.

Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%)

Patients aged >= 18 years on date of encounter

AND

Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

OR

History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996

AND

Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITH OR WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

Left ventricular ejection fraction (LVEF) < 40%: G8694

Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction

Patients aged >= 18 years on date of encounter

AND

Diagnosis for coronary artery disease (ICD-10-CM): I20.0, I20.1, I20.8, I20.9, I24.0, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.82, I25.83, I25.89, I25.9, Z95.1, Z95.5, Z98.61

OR

History of cardiac surgery (CPT): 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 92920, 92924, 92928, 92933, 92937, 92941, 92943, 92980, 92981, 92982, 92984, 92995, 92996

AND

Diagnosis for myocardial infarction– includes patient that had a prior (within the past 3 years) myocardial infarction (ICD-10-CM): I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.0, I22.1, I22.2, I22.8, I22.9, I24.1, I25.2

AND

Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITH OR WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients who had continuous enrollment from discharge date through 179 days after discharge. No more than one gap in continuous enrollment of up to 45 days within the 180 days of the event. If the patient has Medicaid, then no more than a 1-month gap in coverage.

An acute inpatient discharge from July 1 of the year prior to the measurement year through June 30 of the measurement year with any diagnosis of acute myocardial infarction (AMI) on the discharge claim.

To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

If a patient has more than one episode of AMI that meets the event/diagnosis criteria, from July 1 of the year prior to the measurement year through June 30 of the measurement year, include only the first discharge.

Direct transfers to an acute inpatient care setting: If a patient had a direct transfer to an acute inpatient setting (for any diagnosis), use the discharge date from the transfer setting, not the initial discharge. Exclude both the initial discharge and the direct transfer discharge if the transfer discharge occurs after June 30 of the measurement year. Use the instructions below to identify direct transfers and exclude nonacute inpatient stays.

Direct transfers to a nonacute inpatient care setting: Exclude from the denominator, hospitalizations in which the patient had a direct transfer to a nonacute inpatient care setting for any diagnosis. Use the instructions below to identify direct transfers and confirm the stay was for nonacute inpatient care based on the presence of a nonacute code on the claim.

A direct transfer is when the discharge date from the first inpatient setting precedes the admission date to a second inpatient setting by one calendar day or less. For example:

- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 1, is a direct transfer.

- An inpatient discharge on June 1, followed by an admission to an inpatient setting on June 2, is a direct transfer.

- An inpatient discharge on June 1, followed by an admission to another inpatient setting on June 3, is not a direct transfer; these are two distinct inpatient stays.

Use the following method to identify admissions to and discharges from inpatient settings.

1. Identify all acute and nonacute inpatient stays.

2. If needed, identify nonacute inpatient stays.

3. Identify the admission and discharge dates for the stay.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Time Period for Data Collection: 12 consecutive months

Denominator Note:

LVEF < 40% corresponds to qualitative documentation of moderate dysfunction or severe dysfunction. The LVSD may be determined by quantitative or qualitative assessment, which may be current or historical. Examples of a quantitative or qualitative assessment may include an echocardiogram: 1) that provides a numerical value of LVSD or 2) that uses descriptive terms such as moderately or severely depressed left ventricular systolic function. Any current or prior ejection fraction study documenting LVSD can be used to identify patients.

To meet the denominator criteria, a patient must have an active diagnosis of heart failure at the time of the encounter which is used to qualify for the denominator and evaluate the numerator.

The encounter used to evaluate the numerator counts as 1 of the 2 encounters required for denominator inclusion. If the patient meets the heart failure diagnosis criterion, the diagnosis needs to be active only at the encounter being evaluated for the numerator action.

Submission Criteria 1: Patients who were prescribed ACE inhibitor or ARB therapy within a 12-month period when seen in the outpatient setting

Patients aged >= 18 years on date of encounter

AND

Diagnosis for heart failure (ICD-10-CM): I11.0, I13.0, I13.2, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.814, I50.82, I50.83, I50.84, I50.89, I50.9

AND

Patient encounter during performance period – to be used for numerator evaluation (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

At least one additional patient encounter during performance period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITH OR WITHOUT

Telehealth Modifier: GQ, GT, 95, POS 02

AND

Left ventricular ejection fraction (LVEF) less than 40% or documentation of moderately or severely depressed left ventricular systolic function: 3021F

Submission Criteria 2: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy at each hospital discharge

Patients aged >= 18 years on date of encounter

AND

Diagnosis for heart failure (ICD-10-CM): I11.0, I13.0, I13.2, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I I50.814, I50.82, I50.83, I50.84, I50.89, I50.9

AND

Patient encounter during performance period (CPT): 99238, 99239

AND

Left ventricular ejection fraction (LVEF) less than 40% or documentation of moderately or severely depressed left ventricular systolic function: 3021F

Exclusions

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

None

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons)

Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons)

Documentation of system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care system)

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Denominator Exceptions:

Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerance, other medical reasons).

Documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons).

Documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system).

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria:

- Asthma
- COPD
- Obstructive chronic bronchitis
- Chronic respiratory conditions due to fumes and vapors
- Hypotension, heart block >1 degree or sinus bradycardia
- A medication dispensing event indicative of a history of asthma
- Intolerance or allergy to beta-blocker therapy

Additionally, this measure excludes adults in hospice. It also excludes adults with advanced illness and frailty, as well as Medicare adults 65 years of age and older enrolled in an I-SNP or living long-term in institutional settings.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Denominator Exceptions:

Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons).

Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., patient declined, other patient reasons).

Documentation of system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., other system reasons).

Exclusion Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

N/A

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The ACC/AHA/PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are

intended to serve as a guide to clinicians. For measure #0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy-Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons), patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care system).Although this methodology does not require the external reporting of more detailed exception data, the ACC/AHA/PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The ACC/AHA/PCPI also advocates for the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.

Additional details are as follows:

FOR POPULATION 1: Patients who are 18 years and older with a diagnosis of CAD with LVEF < 40%

Report Quality Data Code G8936: Clinician documented that patient was not an eligible candidate for angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy (e.g., allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons) or (e.g., patient declined, other patient reasons) or (e.g., lack of drug availability, other reasons attributable to the health care system)

FOR POPULATION 2: Patients who are 18 years and older with a diagnosis of CAD who have diabetes

Report Quality Data Code G8474: Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy not prescribed for reasons documented by the clinician (e.g., allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons) or (e.g., patient declined, other patient reasons) or (e.g., lack of drug availability, other reasons attributable to the health care system)

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Time Period for Data Collection: During the encounter within the 12-month period

Exceptions are used to remove a patien

t from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or

Left Ventricular Systolic Dysfunction (LVEF <40%), exceptions may include medical reason(s) (eg, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities.

Additional details are as follows:

For Submission Criteria 1 –

Report Quality Data Code, G9190: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons).

Report Quality Data Code, G9191: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons).

Report Quality Data Code, G9192: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).

For Submission Criteria 2 –

Append a modifier to CPT Category II Code:

4008F-1P: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerance, other medical reasons).

4008F-2P: Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons).

4008F-3P: Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system).

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Patients identified as having an intolerance or allergy to beta-blocker therapy. Any of the following any time during the patient's history through the end of the continuous enrollment period meet criteria:

- Asthma
- COPD
- Obstructive chronic bronchitis
- Chronic respiratory conditions due to fumes and vapors
- Hypotension, heart block >1 degree or sinus bradycardia
- A medication dispensing event indicative of a history of asthma

MEDICATIONS TO IDENTIFY HISTORY OF ASTHMA

DESCRIPTION / PRESCRIPTION

Bronchodilator combinations / Budesonide-formoterol; Fluticasone-vilantero; Fluticasone-salmeterol; Formoterol-mometasone

Inhaled corticosteroids / Beclomethasone; Budesonide; Ciclesonide; Flunisolide; Fluticasone; Mometasone

Exclude patients who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the services began. These patients may be identified using various methods, which may include but are not limited to enrollment data, medical record or claims/encounter data.

Exclude adults who meet any of the following criteria:

- Medicare members 66 years of age and older as of December 31 of the measurement year who meet either of the following:

-- Enrolled in an Institutional SNP (I-SNP) any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

-- Living long-term in an institution any time on or between July 1 of the year prior to the measurement year and the end of the measurement year as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run date of the file to determine if an adult had an LTI flag any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

- Members 66-80 years of age as of December 31 of the measurement year (all product lines) with frailty and advanced illness. Adults must meet BOTH of the following frailty and advanced illness criteria to be excluded:

1. At least one claim/encounter for frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

2. Any of the following during the measurement year or the year prior to the measurement year (count services that occur over both years):

-- At least two outpatient visits, observation visits, ED visits, nonacute inpatient encounters or nonacute inpatient discharges (instructions below) on different dates of service, with an advanced illness diagnosis. Visit type need not be the same for the two visits. To identify a nonacute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Confirm the stay was for nonacute care based on the presence of a nonacute code on the claim.

3. Identify the discharge date for the stay.

-- At least one acute inpatient encounter with an advanced illness diagnosis.

-- At least one acute inpatient discharge with an advanced illness diagnosis. To identify an acute inpatient discharge:

1. Identify all acute and nonacute inpatient stays.

2. Exclude nonacute inpatient stays.

3. Identify the discharge date for the stay.

-- A dispensed dementia medication.

DEMENTIA MEDICATIONS

DESCRIPTION / PRESCRIPTION

Cholinesterase inhibitors / Donepezil; Galantamine; Rivastigmine

Miscellaneous central nervous system agents / Memantine

- Members 81 years of age and older as of December 31 of the measurement year (all product lines) with frailty any time on or between July 1 of the year prior to the measurement year and the end of the measurement year.

See attached code value sets.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Time Period for Data Collection: During the encounter within the 12-month period

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD), exceptions may include medical reason(s) (eg, hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (eg, patient declined, other patient reasons), or system reason(s) for not prescribing an ACE inhibitor or ARB or ARNI therapy. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit- readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.

Append a modifier to CPT Category II Code:

4010F-1P: Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons)

4010F-2P: Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., patient declined, other patient reasons)

4010F-3P: Documentation of system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy (e.g., other system reasons)

Risk Adjustment

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

No risk adjustment or risk stratification

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

No risk adjustment or risk stratification

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

No risk adjustment or risk stratification

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

No risk adjustment or risk stratification

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

No risk adjustment or risk stratification

Stratification

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

N/A

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Consistent with CMS' Measures Management System Blueprint and national recommendations put forth by the IOM (now NASEM) and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

No stratification

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer.

Type Score

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Rate/proportion better quality = higher score

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

Rate/proportion better quality = higher score

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Rate/proportion better quality = higher score

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

Rate/proportion better quality = higher score

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Rate/proportion better quality = higher score

Algorithm

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

1) Check if given patient survived hospitalization and is eligible for 1 of the 2 medication therapies.

2) If eligible for at least 1 medication, then keep this patient.

3) If not eligible for any of the 2 medications, then patient is removed from eligibility.

If eligible for ACE/ARB and given, then code “Yes”

If eligible for ACE/ARB and not given, then code “No, no reason”

If eligible for ACE/ARB but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for Beta Blocker and given, then code then “Yes”

If eligible for Beta Blocker and not given, then code “No, no reason”

If eligible for Beta Blocker but contraindicated, then code “No – medical reason” or "No – patient reason”

4) If any “No, no reason” present, then performance not met. Else, performance met.

Although ineligible cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Missing data defaults to “performance not met” This measure assumes that missing documentation on the process results in a failure of meeting an evidence based therapy.

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

To calculate performance rates:

1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, allergy, intolerance, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons), patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, lack of drug availability, other reasons attributable to the health care system)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation.

--Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. 140560| 107246

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

This measure is comprised of two submission criteria but is intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows:

Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)]

Calculation algorithm for Submission Criteria 1: Patients with left ventricular systolic dysfunction (LVEF <40%)

1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (e.g., other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm for Submission Criteria 2: Patients with a prior (within the past 3 years) myocardial infarction

1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) (eg, other reasons attributable to the health care system) for not prescribing beta-blocker therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. 140560| 135810| 117446

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

STEP 1: Determine the eligible population. To do so, identify patients who meet all specified criteria.

- AGES: 18 years and older as of December 31 of the measurement year.

- EVENT/DIAGNOSIS: Identify patients who were discharged from an acute setting with an AMI from July 1 of the year prior to the measurement year through June 30 of the measurement year. SEE S.6 and S.7 for eligible population and denominator criteria and details.

STEP 2: Exclude patients who meet the exclusions criteria. SEE S.8 and S.9 for denominator exclusion criteria and details.

STEP 3: Determine the number of patients in the eligible population who were given a 180-day course of treatment with beta blockers post discharge.

STEP 4: Identify patients whose dispensed days' supply is >=135 days in the 180-day measurement interval. SEE S.4 and S.5 for numerator criteria and details.

STEP 5: Calculate the rate by dividing the numerator (STEP 4) by the denominator (after exclusions) (STEP 2).

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

This measure is comprised of two submission criteria but is intended to result in one reporting rate. The reporting rate is the aggregate of Submission Criteria 1 and Submission Criteria 2, resulting in a single performance rate. For the purposes of this measure, the single performance rate can be calculated as follows:

Performance Rate = (Numerator 1 + Numerator 2)/ [(Denominator 1 - Denominator Exceptions 1) + (Denominator 2 - Denominator Exceptions 2)]

Calculation algorithm for Submission Criteria 1: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy within a 12-month period when seen in the outpatient setting

1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance

measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator.

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g ., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. -- Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Calculation algorithm for Submission Criteria 2: Patients who were prescribed ACE inhibitor or ARB or ARNI therapy at each hospital discharge

1. Find the patients who meet the initial population (i.e., the general group of patients that a set of performance measures is designed to address).

2. From the patients within the initial population criteria, find the patients who qualify for the denominator (i.e., the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.

3. From the patients within the denominator, find the patients who meet the numerator criteria (i.e., the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator.

4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified [for this measure: medical reason(s) (e.g., hypotensive patients who are at immediate risk of cardiogenic shock, hospitalized patients who have experienced marked azotemia, allergy, intolerance, other medical reasons), patient reason(s) (e.g., patient declined, other patient reasons), or system reason(s) for not prescribing ACE inhibitor or ARB or ARNI therapy]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. -- Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (i.e., percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Submission items

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0236 : Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

0594 : Post MI: ACE inhibitor or ARB therapy

0117 : Beta Blockade at Discharge

0071 : Persistence of Beta-Blocker Treatment After a Heart Attack

0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure #0965 is a subset of other measures and the measures are completely harmonized with the exception of one area. It appears that only one measure (#81e) currently includes prescribing of ARNI as an acceptable therapy in the numerator. We assume that the other measures be updated to reflect the current evidence and there is no need for further harmonization.

5b.1 If competing, why superior or rationale for additive value: N/A

0066: Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy

0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0074 : Chronic Stable Coronary Artery Disease: Lipid Control

0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

1522 : ACE/ARB Therapy at Discharge for ICD implant patients with Left Ventricular Systolic Dysfunction

1662 : Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

2467 : Adherence to ACEIs/ARBs for Individuals with Diabetes Mellitus

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: While this measure's specifications are harmonized with existing measures where possible, there are several key differences between this measure and other existing related measures. The first group of related measures (NQF #1662, 1522, 0081, 2467)all have a similar focus on the prescription of ACEI/ARBs. However they all have different target populations, with measure #1662 focusing on patients with chronic kidney disease (CKD), measure #1522 being a facility-level measure focusing on patients with an ICD implant, measure #0081 focusing on patients with a diagnosis of heart failure and left ventricular ejection fraction <40%, and measure #2467 focusing on medication adherence among patients with diabetes. This group of measures reflect the importance of ACEI/ARBs among a variety of patient populations, that are distinct from the patient population included in this measure. We believe that the measures are complementary rather than competing, and differences in the measure specifications are a result of the differences in the target patient population. These differences should not result in any additional data collection burden. The second group of related measures (NQF #0067, 0074, and 0070) all focus on different aspects of care for patients with CAD. Measure #0067 focuses on use of antiplatelet therapy, while measure #0074 focuses on LDL control, and measure #0070 focuses on the use of beta-blocker therapy. We view these measures as complementary measures that, when taken together, provide a rounded view of the quality of care for patients with CAD. While these measures share a focus on the patient population with CAD, differences in measure specifications are reflective of the different care processes being targeted in each measure. We don't believe that these differences result in any additional data collection burden.

5b.1 If competing, why superior or rationale for additive value: This measure addresses a distinct target population and/or quality action from other related measures, as described above. The measures are complementary to form a well-rounded view of the quality of care for patients with CAD.

0070: Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

5.1 Identified measures: 0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0117 : Beta Blockade at Discharge

0127 : Preoperative Beta Blockade

0071 : Persistence of Beta-Blocker Treatment After a Heart Attack

0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0083e : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0070 addresses a patient population of patients with CAD and either a recent prior MI or LVSD.

This patient population is also covered in part by the following NQF-endorsed measures: NQF 0071: Persistence of Beta-Blocker Treatment After a Heart Attack and NQF 0083 and 0083e: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD). The specifications are harmonized to the extent possible. As a result, the denominator specifications for the measures differ where needed based on the differing patient populations. Additionally, NQF 0071 is intended for use at the health plan level. NQF 0117 is an inpatient/hospital level measure and includes only patients who have undergone isolated CABG surgery. NQF 0127 is also an inpatient/hospital level measure that focuses on administration of beta-blockers prior to isolated CABG surgery. Measure 0070e is the EHR version of this measure and is completely harmonized.

5b.1 If competing, why superior or rationale for additive value:

0071: Persistence of Beta-Blocker Treatment After a Heart Attack

5.1 Identified measures: 0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

5a.1 Are specs completely harmonized? No

5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1

5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2

NCQA's current Persistence of Beta Blocker Treatment After a Heart Attack measure (NQF measure 0071) uses health plan-reported data to assess the percentage of patients 18 years of age and older during the measurement year who were discharged with a diagnosis of AMI during the 6 months prior to the beginning of the measurement year through the 6 months after the beginning of the measurement year and who received persistent beta-blocker treatment for six months after discharge.

RELATED NQF MEASURE 0070 (Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)):

This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have a prior MI or a current left ventricular ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy.

HARMONIZED MEASURE ELEMENTS:

Measure 0071 and 0070 focus on patients 18 years and older who are prescribed beta-blocker treatment post-discharge after having a MI or history of MI. The National Quality Strategy Priorities classification for both measures is Prevention and Treatment of Cardiovascular Disease. Both measures exclude patients who are allergic or have an intolerance to beta blockers.

DIFFERENCES:

Below are the unharmonized measure elements between measure 0071 and measure 0070:

Measure 0071 focuses on beta-blocker treatment post a MI and Measure 0070 focuses on patients who have a prior MI or a current or prior LVEF <40%.

- Data Source: Data for measure 0071 is collected through administrative claims, electronic clinical data, and pharmacy data, while data for measure 0070 is collected through medical record, electronic health record data, electronic clinical data, and paper records

- Level of Accountability: Measure 0071 is a health plan level measure while measure 0070 is a clinician-level measure.

- Population: Measure 0071 focuses on patients who were diagnosed with a MI and discharged and prescribed a beta-blocker therapy treatment. Measure 0070 focuses on patients in a measurement year with a diagnosis of coronary artery diseases who also have a prior MI or current or prior LVEF.

- Exclusions: The difference in exclusions is that measure 0071 specifies asthma, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes and vapors, hypotension, hear block >1 degree, sinus bradycardia, and medication dispensing events indicative of a history of asthma as exclusions. Additionally, measure 0071 excludes hospitalizations in which the patient was transferred directly to a nonacute care facility for any diagnosis, patients enrolled in an I-SNP, patients living long-term in an institution, patients 66-80 years of age with frailty and advanced illness, and patients 81 years of age and older with frailty. Measure 0070 exclusions include: documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons) and documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system).

IMPACT ON INTERPRETABILITY AND DATA COLLECTION BURDEN:

The differences between measures 0071 and 0070 do not have an impact on interpretability of publicly reported rates, or the burden of data collection, because all data for both measures are collected from different data sources by different entities.

ANSWER FOR SECTION 5b.1

Our current measure has a long-standing history of use by health plans and has been implemented for nearly 15 years.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

1662 : Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: NQF 1662 is specific to patients with a diagnosis of chronic kidney disease who also have proteinuria. NQF 0066 is specific to patients with coronary artery disease who also have diabetes OR a current/prior LVEF of <40%. In both measures, the population of focus (ie, the denominator) is different. NQF 0081e is the eCQM version of this measure.

5b.1 If competing, why superior or rationale for additive value:

Comparison of NQF 0965, NQF 0081, NQF 0083, NQF 0117, and NQF 0236

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)
0117: Beta Blockade at Discharge
0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Steward

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

American College of Cardiology

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

PCPI Foundation

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

PCPI Foundation

0117: Beta Blockade at Discharge

The Society of Thoracic Surgeons

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Centers for Medicare & Medicaid Services

Description

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Proportion of patients undergoing ICD/CRT-D implant who received prescriptions for all medications (ACE/ARB and beta blockers) for which they are eligible at discharge.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) < 40% who were prescribed beta-blocker therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

0117: Beta Blockade at Discharge

Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on beta blockers

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Percentage of isolated Coronary Artery Bypass Graft (CABG) surgeries for patients aged 18 years and older who received a beta-blocker within 24 hours prior to surgical incision

Type

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Composite

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Process

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Process

0117: Beta Blockade at Discharge

Process

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Process

Data Source

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Registry Data National Cardiovascular Data Registry (NCDR) ICD Registry

Available in attached appendix at A.1 Attachment icd_v2_codersdatadictionary_2-2-637061353934779116-637088191497113357.pdf

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Electronic Health Records Not applicable

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Registry Data Not applicable

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Level

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Facility

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

No data collection instrument provided Attachment 0081e_HF_ACE_ARB_ARNI_ValueSets_20190409.xlsx

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

No data collection instrument provided Attachment NQF0083_I9toI10_conversion_2019Apr09.xlsx

0117: Beta Blockade at Discharge

Registry Data STS Adult Cardiac Surgery Database Version 2.81

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Setting

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Inpatient/Hospital

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Clinician : Group/Practice, Clinician : Individual

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Available at measure-specific web page URL identified in S.1 No data dictionary

0117: Beta Blockade at Discharge

Registry Data The source is the medical record, which provides patient information for the encounter. Medicare Part B claims and registry data is provided for test purposes.

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Numerator Statement

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Generator patients who receive all medications for which they are eligible:

1. ACE/ARB prescribed at discharge (if eligible for ACE/ARB as described in denominator) AND
2. Beta blockers prescribed at discharge (if eligible for beta blockers as described in denominator)

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

No data collection instrument provided Attachment NQF_0236_DataDic-636800391751711336-636832311904869870.xlsx

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Numerator Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

If eligible for ACE/ARB and given, then code “Yes”

If eligible for ACE/ARB but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for ACE/ARB and not given, then code “No, no reason”

If eligible for beta blocker and given, then code “Yes”

If eligible for beta blocker but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for beta blocker and not given, then code “No, no reason”

If any “No, no reason” present, then performance not met. Else, performance met.

Note: Contraindicated and those participating in blinded studies are considered performance met. There are technically no exclusions or exceptions that would remove patients from the denominator.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Patients who were prescribed ACE inhibitor or ARB or ARNI therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Clinician : Group/Practice, Clinician : Individual

0117: Beta Blockade at Discharge

Facility, Clinician : Group/Practice

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Clinician : Group/Practice, Clinician : Individual

Denominator Statement

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

All generator patients surviving hospitalization who are eligible to receive either an ACE/ARB or beta blocker at discharge.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Home Care, Inpatient/Hospital, Other, Outpatient Services Domiciliary, Nursing Facility

0117: Beta Blockade at Discharge

Inpatient/Hospital

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Outpatient Services

Denominator Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

All generator patients surviving hospitalization who are eligible to receive any one of the two medication classes:

1) ACE/ARB: Patients who have an ejection fraction (EF) of <40%

OR

2) Beta blockers:

Patients have either:

a. EF of <40% AND/OR

b. Previous myocardial infarction (MI)

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Definition:

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Patients who were prescribed beta-blocker therapy either within a 12-month period when seen in the outpatient setting OR at each hospital discharge

0117: Beta Blockade at Discharge

Number of patients undergoing isolated CABG who were discharged on beta blockers

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Patients who received a beta-blocker within 24 hours prior to surgical incision of isolated CABG surgeries

Exclusions

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

None

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Prescribed-Outpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB or ARNI therapy as documented in current medication list.

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Time Period for Data Collection: At least once during the measurement period when seen in the outpatient setting OR at each hospital discharge

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Exclusion Details

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

N/A

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Prescribed-Inpatient setting: prescription given to the patient for ACE inhibitor or ARB or ARNI therapy at discharge OR ACE inhibitor or ARB or ARNI therapy to be continued after discharge as documented in the discharge medication list.

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Definition:

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Risk Adjustment

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

No risk adjustment or risk stratification

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

at discharge OR ACE inhibitor or ARB therapy to be continued after discharge as documented in the discharge medication list.

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Prescribed-Outpatient setting: prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list.

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Stratification

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

N/A

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Guidance:

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Prescribed-Inpatient setting: prescription given to the patient for beta-blocker therapy at discharge OR beta-blocker therapy to be continued after discharge as documented in the discharge medication list.

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Type Score

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

Rate/proportion better quality = higher score

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Eligible clinicians who have given a prescription for or whose patient is already taking an Angiotensin-Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor Blocker (ARB) would meet performance for this measure. Other combination therapies that consist of an ACEI plus diuretic, ARB + neprilysin inhibitor (ARNI), ARB plus diuretic, ACEI plus calcium channel blocker, ARB plus calcium channel blocker, or ARB plus calcium channel blocker plus diuretic would also meet performance for this measure.

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Beta-blocker therapy: For patients with prior LVEF < 40%, beta-blocker therapy should include bisoprolol, carvedilol, or sustained release metoprolol succinate.

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Algorithm

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

1) Check if given patient survived hospitalization and is eligible for 1 of the 2 medication therapies.

2) If eligible for at least 1 medication, then keep this patient.

3) If not eligible for any of the 2 medications, then patient is removed from eligibility.

If eligible for ACE/ARB and given, then code “Yes”

If eligible for ACE/ARB and not given, then code “No, no reason”

If eligible for ACE/ARB but contraindicated, then code “No – medical reason” or "No – patient reason”

If eligible for Beta Blocker and given, then code then “Yes”

If eligible for Beta Blocker and not given, then code “No, no reason”

If eligible for Beta Blocker but contraindicated, then code “No – medical reason” or "No – patient reason”

4) If any “No, no reason” present, then performance not met. Else, performance met.

Although ineligible cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

Missing data defaults to “performance not met” This measure assumes that missing documentation on the process results in a failure of meeting an evidence based therapy.

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

HQMF eCQM developed and is attached to this submission in fields S.2a and S.2b.

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Numerator Note: To meet the intent of the measure, the numerator quality action must be performed at the encounter at which the active diagnosis of heart failure is documented.

0117: Beta Blockade at Discharge

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Submission items

0965: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD/CRT-D Implant Patients

5.1 Identified measures: 0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%)

0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0081 : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0083 : Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

0236 : Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

0594 : Post MI: ACE inhibitor or ARB therapy

0117 : Beta Blockade at Discharge

0071 : Persistence of Beta-Blocker Treatment After a Heart Attack

0070e : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0081e : Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: Measure #0965 is a subset of other measures and the measures are completely harmonized with the exception of one area. It appears that only one measure (#81e) currently includes prescribing of ARNI as an acceptable therapy in the numerator. We assume that the other measures be updated to reflect the current evidence and there is no need for further harmonization.

5b.1 If competing, why superior or rationale for additive value: N/A

0081: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin Receptor-Neprilysin Inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

All patients aged 18 years and older with a diagnosis of heart failure with a current or prior LVEF < 40%

0083: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)

For Submission Criteria 1 and Submission Criteria 2, report Quality Data Code, G8450: Beta-blocker therapy prescribed

0117: Beta Blockade at Discharge

Number of isolated CABG procedures in which discharge beta blockers [DCBeta (STS Adult Cardiac Surgery Database Version 2.81)] is marked "yes"

0236: Coronary Artery Bypass Graft (CABG): Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Numerator Options:

Comparison of NQF 3534 and NQF 2561

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).
2561: STS Aortic Valve Replacement (AVR) Composite Score

Steward

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

American College of Cardiology

2561: STS Aortic Valve Replacement (AVR) Composite Score

The Society of Thoracic Surgeons

Description

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

This measure estimates hospital risk standardized odds ratio for death from all causes within 30 days following transcatheter aortic valve replacement. The measure uses clinical data available in the STS/ACC TVT Registry for risk adjustment. For the purpose of development and testing, the measure used site-reported 30-day follow-up data contained in the STS/ACC TVT Registry.

2561: STS Aortic Valve Replacement (AVR) Composite Score

STS AVR Composite Score comprises two domains consisting of six measures: Domain 1) Absence of Operative Mortality – Proportion of patients (risk-adjusted) who do not experience operative mortality. Operative mortality is defined as death during the same hospitalization as surgery or after discharge but within 30 days of the procedure; and Domain 2) Absence of Major Morbidity – Proportion of patients (risk-adjusted) who do not experience any major morbidity. Major morbidity is defined as having at least one of the following adverse outcomes: 1. reoperations for any cardiac reason, 2. renal failure, 3.

deep sternal wound infection, 4. prolonged ventilation/intubation, and 5. cerebrovascular accident/permanent stroke. All measures are based on audited clinical data collected in a prospective registry and are risk-adjusted.

Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score was created by "rolling up" the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance). Star ratings are publicly reported on the STS website and are also currently reported on the Consumer Reports website.

Type

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Outcome

2561: STS Aortic Valve Replacement (AVR) Composite Score

Composite

Data Source

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Registry Data STS/ACC TVT Registry

Available at measure-specific web page URL identified in S.1 Attachment TAVR_S.2b_attachment-637092425369121221.xlsx

2561: STS Aortic Valve Replacement (AVR) Composite Score

Registry Data STS Adult Cardiac Surgery Database Version 2.81 (effective July 1, 2014); Version 2.9 (effective July 1, 2017)

Available at measure-specific web page URL identified in S.1 Attachment S.2b._-_S.15._Detailed_Risk_Model_Specifications.STS_AVR_Composite_Score.docx

Level

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Facility

2561: STS Aortic Valve Replacement (AVR) Composite Score

Facility, Clinician : Group/Practice

Setting

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Inpatient/Hospital

2561: STS Aortic Valve Replacement (AVR) Composite Score

Inpatient/Hospital

Numerator Statement

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

The outcome of this measure is all-cause death within 30 days following a transcatheter aortic valve replacement (TAVR).

2561: STS Aortic Valve Replacement (AVR) Composite Score

Due to the complex methodology used to construct the composite measure, it is impractical to separately discuss the numerator and denominator. The following discussion describes how each domain score is calculated and how these are combined into an overall composite score.

The STS AVR Composite Score comprises two domains consisting of six individual measures:

1. Absence of Operative Mortality

NQF # 0120 Risk-Adjusted Operative Mortality for AVR

2. Absence of Major Morbidity, scored any-or-none. The measures used are the same morbidity outcomes included in NQF #0696 STS CABG Composite Score.

Risk-Adjusted Postoperative Stroke/Cerebrovascular Accident

Risk-Adjusted Postoperative Surgical Re-exploration

Risk-Adjusted Postoperative Deep Sternal Wound Infection Rate

Risk-Adjusted Postoperative Renal Failure

Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)

Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score is created by “rolling up” the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance).

Patient Population: The analysis population consists of adult patients aged 18 years or older who undergo isolated AVR surgery

Time Period: 3 years

Data Completeness Requirement: Participants are excluded from the analysis if they have fewer than 10 isolated AVR procedures in the patient population.

Technical Details

The unit of measurement for the STS AVR Composite Score can be either a participant (most often a cardiac surgical practice but occasionally an individual surgeon) or a hospital.

For the Absence of Operative Mortality domain, the NUMERATOR is:

Number of patients undergoing isolated AVR who survived until after discharge and >30 days post-surgery

For the Absence of Major Morbidity domain, the NUMERATOR is:

Number of patients undergoing isolated AVR who did not experience any of the

five specified major morbidity endpoints*

*Morbidity endpoints consist of postoperative stroke/cerebrovascular accident, surgical re-exploration, deep sternal wound infection, renal failure, prolonged intubation

(ventilation). Patients with documented history of renal failure (i.e., dialysis or baseline serum creatinine of 4.0 or higher) are excluded when counting renal failure outcomes.

STS AVR risk models are used to estimate expected rates of mortality and any-or-none morbidity (Reference: O'Brien SM, Shahian DM, Filardo G, et al. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: part 2—isolated valve surgery. Ann Thorac Surg 2009;88(1 Suppl):S23–42). To enhance interpretation, mortality rates are converted to survival rates (risk-standardized survival rate = 100 – risk-standardized mortality rate), and morbidity rates are converted to "absence of morbidity" rates (risk-standardized absence of morbidity rate =100 – risk-standardized morbidity rate). Defining scores in this manner ensures that increasingly positive values reflect better performance, which is easier for consumers to interpret.

(Please see the appendix for the formula used to calculate the overall composite score.)

The method is equivalent to calculating a weighted average, with weights proportional to the inverse of the SD. In the most recent production of the STS AVR Composite Score based on data from July 2010 – June 2013, wtmort=0.79 and wtmorb = 0.21.

Star Rating: Star ratings are derived by testing whether the participant's composite or domain score is significantly different from the overall STS average. For instance, if for each of the 2 composite score domains, a participant's estimated score is lower than the overall STS average, but the difference between the participant and STS is not statistically significant, the ratings would each be 2 stars. If however, for the overall composite, the point estimate is lower than the STS average, AND this difference is statistically significant, the overall participant star rating is 1 star. The fact that statistical significance was achieved for the composite score but not the individual domains reflects the greater precision of the composite score compared to

individual endpoints. This precision is achieved by aggregating information across multiple endpoints instead of a single endpoint.

Additional details regarding the AVR Composite Score are provided in the attached manuscript:

Shahian DM, He X, Jacobs JP, et al. The Society of Thoracic Surgeons Isolated Aortic Valve Replacement (AVR) Composite Score: a report of the STS Quality Measurement Task Force. Ann Thorac Surg 2012;94:2166-71.

Numerator Details

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

NUMERATOR:

1. Discharge status of expired or

2. Follow-up status=deceased and date difference between index procedure and death date is <=30 or

3. 30-day follow-up status=deceased, death date is missing, and difference between index procedure and follow-up assessment date is <=75 days. *

*Notes: The <=75 day follow-up assessment timeframe was identified to be a clinically reasonable surrogate to capture a 30 day death if 30 day follow-up date of death was missing (this occurred in 0.9% of deceased records from January 2015 to December 2017).

Sometimes a status of “deceased” is known and documented but the exact date of death is not available.

In addition, we validated the accuracy of 30-day mortality in the TVT Registry by comparing Registry data linked CMS claims data from 2012-2015. Across 3.5 years, 99.6% of the 29,247 patient records had no discrepancy.

2561: STS Aortic Valve Replacement (AVR) Composite Score

Please see S.4 above

Denominator Statement

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

The target population for the outcome is for individuals who have undergone transcatheter aortic valve replacement.

For development, reassessment and reporting of this measure, we use site reported data from the STS/ACC TVT Registry.

2561: STS Aortic Valve Replacement (AVR) Composite Score

Due to the complex methodology used to construct the composite measure, it is impractical to separately discuss the numerator and denominator. The following discussion describes how each domain score is calculated and how these are combined into an overall composite score.

The STS AVR Composite Score comprises two domains consisting of six individual measures:

1. Absence of Operative Mortality

NQF # 0120 Risk-Adjusted Operative Mortality for AVR

2. Absence of Major Morbidity, scored any-or-none. The measures used are the same morbidity outcomes included in NQF #0696 STS CABG Composite Score.

Risk-Adjusted Postoperative Stroke/Cerebrovascular Accident

Risk-Adjusted Postoperative Surgical Re-exploration

Risk-Adjusted Postoperative Deep Sternal Wound Infection Rate

Risk-Adjusted Postoperative Renal Failure

Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)

Participants receive a score for each of the two domains, plus an overall composite score. The overall composite score is created by “rolling up” the domain scores into a single number. In addition to receiving a numeric score, participants are assigned to rating categories designated by one star (below average performance), two stars (average performance), or three stars (above average performance).

Patient Population: The analysis population consists of adult patients aged 18 years or older who undergo isolated AVR surgery

Time Period: 3 years

Data Completeness Requirement: Participants are excluded from the analysis if they have fewer than 10 isolated AVR procedures in the patient population.

Technical Details

The unit of measurement for the STS AVR Composite Score can be either a participant (most often a cardiac surgical practice but occasionally an individual surgeon) or a hospital.

For the Absence of Operative Mortality domain AND the Absence of Major Morbidity domain, the DENOMINATOR is:

Number of patients undergoing isolated AVR during the measurement period

STS AVR risk models are used to estimate expected rates of mortality and any-or-none morbidity (Reference: O'Brien SM, Shahian DM, Filardo G, et al. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: part 2—isolated valve surgery. Ann Thorac Surg 2009;88(1 Suppl):S23–42). To enhance interpretation, mortality rates are converted to survival rates (risk-standardized survival rate = 100 – risk-standardized

mortality rate), and morbidity rates are converted to "absence of morbidity" rates (risk-standardized absence of morbidity rate =100 – risk-standardized morbidity rate). Defining scores in this manner ensures that increasingly positive values reflect better performance, which is easier for consumers to interpret.

(Please see the appendix for the formula used to calculate the overall composite score.)

The method is equivalent to calculating a weighted average, with weights proportional to the inverse of the SD. In the most recent production of the STS AVR Composite Score based on data from July 2010 – June 2013, wtmort=0.79 and wtmorb = 0.21.

Star Rating: Star ratings are derived by testing whether the participant's composite or domain score is significantly different from the overall STS average. For instance, if for each of the 2 composite score domains, a participant's estimated score is lower than the overall STS average, but the difference between the participant and STS is not statistically significant, the ratings would each be 2 stars. If however, for the overall composite, the point estimate is lower than the STS average, AND this difference is statistically significant, the overall participant star rating is 1 star. The fact that statistical significance was achieved for the composite score but not the individual domains reflects the greater precision of the composite score compared to

individual endpoints. This precision is achieved by aggregating information across multiple endpoints instead of a single endpoint.

Additional details regarding the AVR Composite Score are provided in the attached manuscript:

Shahian DM, He X, Jacobs JP, et al. The Society of Thoracic Surgeons Isolated Aortic Valve Replacement (AVR) Composite Score: a report of the STS Quality Measurement Task Force. Ann Thorac Surg 2012;94:2166-71.

Denominator Details

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Measure Eligibility and Population Definition

1) Eligibility at the hospital level:

a) Acceptable "Data Quality Report" data submissions for each quarter in the reporting period.

b) Hospitals must have >=90% completeness of the following items for all patient records in the rolling 3-year reporting period to receive feedback on the measure:

i) Computed baseline Kansas City Cardiomyopathy Questionnaire (a key risk model covariate) AND

ii) Baseline 5-meter walk test (a key model covariate), AND

iii) 30-day follow-up status =alive or dead as defined above (the outcome variable)

2) Eligibility at the patient level: Hospitalization for first-time TAVR procedure

2561: STS Aortic Valve Replacement (AVR) Composite Score

Please see S.6 above

Exclusions

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

1) Hospitals need to meet eligibility criteria to be included in the measure.

2) Patients are excluded if:

a) They did not have a first-time TAVR in the episode of care (admission),

b) The TAVR was subsequent to another procedure in the Registry (other TAVR, Mitral Leaflet Clip and/or TMVR) during that admission.

c) The patient is readmitted for a repeat TAVR (re-admission) and the initial TAVR was performed during the rolling 3-year timeframe for the measure.

d) 30-day mortality status missing.

2561: STS Aortic Valve Replacement (AVR) Composite Score

Please see S.6 above

Exclusion Details

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

1) Hospital ineligibility:

a) Unacceptable data quality report submissions for all quarters of the reporting time-period.

b) Hospitals who have less than 90% of patient records with respect to ANY of the following assessments in the rolling 3-year reporting period:

i) Computed baseline Kansas City Cardiomyopathy Questionnaire (a key risk model covariate) OR

ii) Baseline 5 meter walk test (a key model covariate), OR

iii) 30 day follow-up status =alive or dead as defined above (the outcome variable)

2) Patient Ineligibility:

a) They did not have a first-time TAVR in the episode of care (admission),

b) The TAVR was subsequent to another procedure in the Registry (other TAVR, Mitral Leaflet Clip and/or TMVR) during that admission.

c) The patient is readmitted for a repeat TAVR (re-admission) and the initial TAVR was performed during the rolling 3-year timeframe for the measure.

d) 30-day mortality status is missing.

2561: STS Aortic Valve Replacement (AVR) Composite Score

Please see S.6 above

Risk Adjustment

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Statistical risk model

118162

118162

2561: STS Aortic Valve Replacement (AVR) Composite Score

Statistical risk model

Stratification

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

This measure will not be stratified.

2561: STS Aortic Valve Replacement (AVR) Composite Score

N/A

Type Score

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

Ratio better quality = lower score

2561: STS Aortic Valve Replacement (AVR) Composite Score

Rate/proportion better quality = higher score

Algorithm

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

The measure score is calculated based on the following steps:

1) Patient cohort is identified based on inclusion criteria (see questions S.7-S.11)

2) Data elements for risk adjusted are collected using the first collected value, as identified below;

3) Outcome is ascertained (see S.5)

4) Measure score is calculated with aggregated data across all included sites as described below. Risk adjustment variables include:

1. Age
2. Body surface area (BSA)
3. Sex
4. Race/ethnicity
5. Estimated glomerular filtration rate (eGFR), which quantifies kidney function

6. Hemodialysis for end-stage renal disease
7. Left ventricular ejection fraction (LVEF)
8. Hemoglobin
9. Platelet count
10. Procedure date
11. Left main coronary artery stenosis = 50%
12. Proximal left anterior descending coronary artery stenosis = 70%
13. Prior myocardial infarction
14. Endocarditis
15. Gait speed (via the 5-meter walk test which assesses frailty)
16. Baseline Kansas City Cardiomyopathy Questionnaire-12 (KCCQ-12, a measure of heart-failure specific health status)
17. Peripheral artery disease
18. Current/recent smoker
19. Diabetes
20. Atrial fibrillation/flutter
21. Conduction defect
22. Chronic lung disease
23. Home oxygen
24. "Hostile" chest
25. Porcelain (severely concentrically calcified) aorta
26. Access site
27. Pacemaker
28. Previous implantable cardioverter defibrillator
29. Prior percutaneous coronary intervention
30. Prior coronary artery bypass surgery
31. # prior cardiac operations
32. Prior aortic valve surgery/procedure
33. Prior other valve procedure surgery/procedure (mitral, tricuspid, pulmonic)
34. Aortic valve disease etiology
35. Aortic valve morphology
36. Aortic insufficiency (moderate or severe)
37. Mitral insufficiency (moderate or severe)
38. Tricuspid insufficiency (moderate or severe)
39. Acuity status (defined by a combination of procedure status, prior cardiac arrest w/in 24 hours, need for pre-procedure inotropic medications, and use of mechanical assist device)
40. Carotid stenosis
41. Prior transient ischemic attack or stroke

Case mix adjustment is implemented using a hierarchical logistic regression model with the above covariates and a site-specific random intercept. The main summary measure of a hospital's risk-adjusted outcomes performance is the hospital's estimated odds ratio, which compares the predicted odds of death of the patient population at a hospital if TAVR is performed by the hospital of interest to the predicted odds of death if TAVR were performed by an average hospital. An odds ratio greater than 1 implies higher than expected mortality and an odds ratio less than 1 implies lower than expected mortality. Each hospital's estimated odds ratio is reported along with an approximate 95% empirical Bayes interval around the estimated odds ratio.

Definition of Measure Score Calculation - Odds ratio: a parameter reflecting the association between risk factors and an outcome.

The Risk Standardized Odds Ratio is calculated as the odds that an outcome (e.g. 30-day mortality) will occur for patients treated at your facility compared to the “odds” that outcome will occur for patients with identical risk factors if treated by a hypothetical (average) hospital.

It conceptually allows for a comparison of a particular hospital’s performance given its case mix to an average hospital’s performance with the same case mix. Thus, a lower odds ratio implies lower-than-expected mortality (better quality) and a higher ratio implies higher-than-expected mortality (worse quality). To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

References:

Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22 (2): 206-226.

Arnold, S.V. et al. Measures in the Risk Adjustment of 30-Day Mortality After Transcatheter Aortic Valve Replacement: A Report From the Society of Thoracic Surgeons/American College of Cardiology TVT Registry JACC: Cardiovascular Interventions Volume 11, Issue 6, 26 March 2018, Pages 581-589 118162

2561: STS Aortic Valve Replacement (AVR) Composite Score

Please see S.4 and S.6 above

Submission items

3534: 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR).

5.1 Identified measures:

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: While this measure focuses on a different population (ie those undergoing surgical AVR) and different outcomes, the current measure has been harmonized to the extent possible. Residual differences in the two models include the following: 1. Some variables are unique to each population/procedure/measure (e.g. TAVR 30-day RAM includes variables unique to the procedure such as gait speed, KCCQ, access site, porcelain aorta and aortic valve morphology). 2. The outcome of each measure is different. TAVR 30-day RAM is subset of the STS AVR Composite Score (which includes 30-day mortality as well as 5 morbidities). 3. The patient population of each measure is different. TAVR 30 day RAM is only patients who

had a transcatheter aortic valve replacement procedures. STS AVR Composite is for all patients having an aortic valve replacement (which MAY include a TAVR).

5b.1 If competing, why superior or rationale for additive value: N/A

2561: STS Aortic Valve Replacement (AVR) Composite Score

5.1 Identified measures: 0120 : Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR)

0131 : Risk-Adjusted Stroke/Cerebrovascular Accident

0115 : Risk-Adjusted Surgical Re-exploration

0130 : Risk-Adjusted Deep Sternal Wound Infection

0114 : Risk-Adjusted Postoperative Renal Failure

0129 : Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)

5a.1 Are specs completely harmonized? Yes

5a.2 If not completely harmonized, identify difference, rationale, impact: N/A

5b.1 If competing, why superior or rationale for additive value: N/A

Appendix F: Pre-Evaluation Comments

No comments received as of January 28, 2020.

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