NATIONAL QUALITY FORUM

MEASURE WORKSHEET

This document summarizes the evaluation of the measure as it progresses through NQF's Consensus Development Process (CDP). The information submitted by measure developers/stewards is included after the Brief Measure Information, Preliminary Analysis, and Pre-meeting Public and Member Comments sections.

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Brief Measure Information

NQF #: 0076

Corresponding Measures:

De.2. Measure Title: Optimal Vascular Care

Co.1.1. Measure Steward: MN Community Measurement

De.3. Brief Description of Measure: 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

1b.1. Developer Rationale: The intermediate physiological and biochemical outcomes included in this composite measure along with the appropriate use of statins and daily aspirin or antiplatelets are modifiable lifestyle risk factors that can ultimately decrease the incidence of long term catastrophic events and chronic illness associated with cardiovascular disease.

S.4. Numerator Statement: 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

S.6. Denominator Statement: 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.

S.8. Denominator Exclusions: 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.

De.1. Measure Type: Composite

S.17. Data Source: Electronic Health Records, Paper Medical Records

S.20. Level of Analysis: Clinician : Group/Practice

IF Endorsement Maintenance – Original Endorsement Date: Aug 10, 2009 **Most Recent Endorsement Date:** Dec 08, 2016

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? This is a composite "all or none" measure calculated at the patient level, each individual patient needs to meet all four component targets to be considered in the numerator. All components are contained within this measure and the measure is not paired with another measure.

Preliminary Analysis: Maintenance of Endorsement

To maintain NQF endorsement endorsed measures are evaluated periodically to ensure that the measures still meets the NQF endorsement criteria ("maintenance"). The emphasis for maintaining endorsement is focused on how effective the measure is for promoting improvements in quality. Endorsed measures should have some experience from the field to inform the evaluation. The emphasis for maintaining endorsement is noted for each criterion.

Criteria 1: Importance to Measure and Report

1a. Evidence

Maintenance measures – less emphasis on evidence unless there is new information or change in evidence since the prior evaluation.

1a. Evidence. The evidence requirements for a *structure, process or intermediate outcome* measure is that it is based on a systematic review (SR) and grading of the body of empirical evidence where the specific focus of the evidence matches what is being measured. For measures derived from patient report, evidence also should demonstrate that the target population values the measured process or structure and finds it meaningful.

The evidence subcriterion (1a) must be met for each component of the composite – the 4 components of this composite have individual evidence forms and preliminary staff ratings.

The developer provides the following evidence for this measure: **Component #1 Blood Pressure**

- **Systematic Review of the evidence specific to this measure?** ☒ **Yes** ☐ **No**
- **Quality, Quantity and Consistency of evidence provided?** ☒ **Yes** ☐ **No**
- **Evidence graded?** ☒ **Yes** ☐ **No**

Summary of prior review in 2016

- The developer provided a diagram illustrating the steps between the assessment of blood pressure control at each visit and reducing the risk of long term cardiovascular complications associated with hypertension.
- The developer provided three recommendations for blood pressure targets from the 2015 AHA/ACC/ASH Scientific Statement on the Treatment of Hypertension in Patients with Coronary Artery Disease:
    - BP Goal for patients with CAD is <140/90 mm Hg. **Class I; Level of Evidence: A**
    - The <140/90-mm Hg BP target is reasonable for the secondary prevention of cardiovascular events in patients with hypertension and CAD. **Class IIa; Level of Evidence B**
    - A lower target BP (<130/80 mm Hg) may be appropriate in some individuals with CAD, previous MI, stroke or transient ischemic attack, or CAD risk equivalents (carotid artery disease, PAD, abdominal aortic aneurysm). **Class IIb; Level of Evidence B**
- The developer provided a systematic review of the body of the evidence supporting the treatment of hypertension for patients with cardiovascular disease to a target blood pressure goal of less than 140 systolic and less than 90 diastolic.
- The developer also provided the Quality, Quantity, and Consistency of the body of evidence which included 8 randomized control trials, 6 prospective observational studies, 1 meta-analysis including 147 RCTs and 1 meta-regression including 31 interventional trials.
- The developer noted that there was data that supported, but did not prove, a lower blood pressure target (<130/80 mm Hg) may be appropriate in some individuals with CAD.

Changes to evidence from last review

☐ **The developer attests that there have been no changes in the evidence since the measure was last evaluated.**

☒ **The developer provided updated evidence for this measure:**

Updates:

- The developer provided a Cochrane Review: Blood pressure targets for the treatment of people with hypertension and cardiovascular disease (2018).
- This review concluded "At present, evidence is insufficient to justify lower blood pressure targets (K 135/85 mmHg) in people with hypertension and established cardiovascular disease. More trials are needed to examine this topic."
- The developer's measure development workgroup for this measure concluded that the lack of consensus in the guidelines left no clear direction for measurement to align with and recommended the target remain unchanged from previous versions.
- Process measure (Box 3) → Based on systematic review (Box 4) → QQC provided (Box 5) → Quantity: High, Quality: High, Consistency: Moderate → Moderate rating

Exception to evidence: N/A

The developer provides the following evidence for this measure: **Component #2 Cholesterol Statin Use**

The developer provides the following evidence for this measure:

- **Systematic Review of the evidence specific to this measure?** ☒ **Yes** ☐ **No**
- **Quality, Quantity and Consistency of evidence provided?** ☒ **Yes** ☐ **No**
- **Evidence graded?** ☒ **Yes** ☐ **No**

Summary of prior review in 2016

- The developer provided a diagram illustrating the steps between assessing patients (age ≥21 to 75) with cardiovascular disease variables/risk to determine appropriate statin use and reducing the risk of long term cardiovascular complications associated with increased cholesterol levels.

    - The developer provided 2 systematic reviews: ICSI Stable Coronary Artery Disease (April 2011), Address Modifiable Risk Factors and Comorbid Conditions and ICSI Lipid Management in Adults (October 2009).
- The developer provided two clinical guidelines with recommendations for statin treatment:
    - ICSI Lipid Management in Adults (updated Nov 2013/completed prior to ACC/AHA release). Initiate Statin Treatment Recommendations: Clinicians should initiate statin therapy regardless of LDL, in patients with established ASCVD. **Evidence Grading**: **Strong Recommendation** (The work group is confident that the desirable effects of adhering to this recommendation outweigh the undesirable effects. This is a strong recommendation for or against. This applies to most patients.), **High Quality Evidence** (Further research is very unlikely to change our confidence in the estimate of effect)
    - 2013 ACC/AHA Guideline: Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults:
        - High-intensity statin therapy should be initiated or continued as first-line therapy in women and men <75 years of age who have clinical ASCVD[*], unless contraindicated. **Class I; Level of Evidence: A**
        - In individuals with clinical ASCVD* in whom high-intensity statin therapy would otherwise be used, when high-intensity statin therapy is contraindicated or when characteristics predisposing to statin-associated adverse effects are present, moderate-intensity statin should be used as the second option if tolerated. **Class I; Level of Evidence: A**
    - The developer also provided secondary prevention recommendations from the ACC/AHA guideline for adults ≤75 years of age with clinical ASCVD who are not receiving statin therapy or receiving a low- or moderate-intensity statin. The recommendations state that moderate-intensity therapy should be used, if tolerated, when either high-intensity statin therapy is contraindicated or patient characteristics predisposing to statin associated adverse effects are present. There was not clear evidence of an additional reduction in ASCVD events from high-intensity statin therapy in patients >75.
- The developer provided a systematic review of the body of evidence supporting the prevention of secondary cardiovascular events for patients with cardiovascular disease by appropriately prescribing statin medications.
- The developer also provided the Quantity, Quality, and Consistency of the body of evidence which included 60 randomized control trials, 1 systematic review and 1 meta-analysis.
- Process measure (Box 3) → Based on systematic review (Box 4) → QQC provided (Box 5) → Quantity: High, Quality: High, Consistency: High → High rating

Changes to evidence from last review

☒ **The developer attests that there have been no changes in the evidence since the measure was last evaluated.**

☐ **The developer provided updated evidence for this measure:**

Updates:

Exception to evidence: N/A

The developer provides the following evidence for this measure: **Component #3 Tobacco Free**

[*] Clinical ASCVD includes acute coronary syndromes, history of MI, stable or unstable angina, coronary or other arterial revascularization, stroke, TIA, or peripheral arterial disease presumed to be of atherosclerotic origin.

Summary of prior review in 2016

- The developer provided evidence from the United States Preventive Services Task Force (USPSTF) stating that despite considerable progress in tobacco control over the past 50 years, in 2013, an estimated 17.8% of U.S. adults and 15.9% of pregnant women aged 15 to 44 years were current cigarette smokers.
- The CDC indicated that smoking is a major cause of cardiovascular disease and that tobacco use contributes to heart disease and stroke by raising triglycerides, lowering (good) HDL cholesterol, increases clotting factors, damages cells that line blood vessels, increases the buildup of plague, and causes thickening and narrowing of blood vessels.
- Health outcome measure (Box 1) → The relationship between the outcome and at least one process is identified and supported by the stated rationale → Pass

Changes to evidence from last review

☐ **The developer attests that there have been no changes in the evidence since the measure was last evaluated.**

☒ **The developer provided updated evidence for this measure:**

Updates:

- The developer provided an additional study: Receipt of evidence-based brief cessation interventions by health professionals and use of cessation assisted treatments among current adult cigarette-only smokers: National Adult Tobacco Survey, 2009–2010. This study demonstrated 5 As (Ask about tobacco use, Advise tobacco users to quit, Assess willingness to make a quit attempt, Assist tobacco users in making a quit attempt, and Arrange for follow-up) interventions significantly increased patients' use of recommended counseling and medication for cessation.

Exception to evidence: N/A

The developer provides the following evidence for this measure: **Component #4 Daily Aspirin or Anti-Platelet Medication**

- **Systematic Review of the evidence specific to this measure?** ☒ **Yes** ☐ **No**
- **Quality, Quantity and Consistency of evidence provided?** ☒ **Yes** ☐ **No**
- **Evidence graded?** ☒ **Yes** ☐ **No**

Summary of prior review in 2016

- The developer provided a diagram illustrating the steps between assessing patients with cardiovascular disease variables/risk to determine appropriate aspirin/anti-platelet use and reducing the risk of a subsequent cardiovascular event (secondary prevention).
- The developer provided three recommendations for antiplatelet agents/anticoagulants for patients with ischemic vascular disease from the AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2011 Update:
    - Aspirin 75–162 mg daily is recommended in all patients with coronary artery disease unless contraindicated. **Class I; Level of Evidence: A**
        - Clopidogrel 75 mg daily is recommended as an alternative for patients who are intolerant of or allergic to aspirin. **Class I; Level of Evidence: B**
    - For patients with symptomatic atherosclerotic peripheral artery disease of the lower extremity, antiplatelet therapy with aspirin (75–325 mg daily) or clopidogrel (75 mg daily) should be started and continued. **Class I; Level of Evidence: A**
- The developer provided a systematic review of the body of the evidence supporting the prevention of secondary cardiovascular events for patients with cardiovascular disease by appropriately prescribing aspirin or anti-platelet medications.

- The developer also provided the Quality, Quantity, and Consistency of the body of evidence which included one meta-analysis of 22 randomized control trials; one collaborative meta-analysis involving 287 studies; 135,000 patients: therapy vs. control; and 77,000 patients comparing different anti-platelet regimens.

Changes to evidence from last review

☐ **The developer attests that there have been no changes in the evidence since the measure was last evaluated.**

☒ **The developer provided updated evidence for this measure:**

Updates:

- The developer provided two, more recent guidelines:
  - American College of Cardiology Clinician Guide to the ABCs of Primary and Secondary Prevention of Atherosclerotic Cardiovascular Disease 2018, recommendations for antiplatelet therapy for secondary prevention:
    - Aspirin 81-162 mg/day indefinitely. **Class I**
    - Clopidogrel, prasugrel, or ticagrelor (i.e., PY12 inhibitor) in addition to aspirin after PCI. **Class I**
      - Medication, dosing, and duration depend on the type of stent and whether on dual antiplatelet therapy.
    - Aspirin 81-325 mg/day or clopidogrel for all patients following a non-cardioembolic ischemic stroke. **Class I**
  - American College of Cardiology Dual Anti Platelet Therapy (DAPT) Guidelines
    - In patients treated with DAPT, a daily aspirin dose of 81 mg (range 75 mg to 100 mg) is recommended. **Class I; Level of Evidence: B-NR**
- Process measure (Box 3) → Based on systematic review (Box 4) → QQC not provided (Moderate is highest possible rating) (Box 6) → Strong recommendation → Moderate rating

Exception to evidence: N/A

Questions for the Committee:

- The evidence provided by the developer is updated, directionally the same, and stronger compared to that for the previous NQF review. Does the Committee agree there is no need for repeat discussion and vote on Evidence?

Guidance from the Evidence Algorithm

- For each component measure: Process measure (Box 3) → Based on systematic review (Box 4) → QQC may or may not be provided (Box 6) → Range of QQCs and strengths, but all at least moderate → Moderate rating

Preliminary rating for evidence: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

1b. Gap in Care/Opportunity for Improvement and 1b. Disparities

Maintenance measures – increased emphasis on gap and variation

1b. Performance Gap. The performance gap requirements include demonstrating quality problems and opportunity for improvement

The intermediate physiological and biochemical outcomes included in this composite measure along with the appropriate use of statins and daily aspirin or antiplatelets are modifiable risk factors that can ultimately

decrease the incidence of long term catastrophic events and chronic illness associated with cardiovascular disease.

In 2019 (2018 dates of service), 678 clinics submitted data on over 185,000 patients with ischemic vascular disease. 61.1% of the patients met all four component targets in the composite measure and were considered optimally managed. Of the clinics that were reportable (patient n >= 30), there was a wide range of variability with the lowest scoring clinic at 16.1% and the highest scoring clinic at 83.1%.

The trends for this measure are as follows:

Report Year	Rate	Patients (Denominator)	Numerator	Eligible	% submit/eligible
2016	66.1%	104,395	69,026	104,494	99.9%
2017	61.6%	186,913	115,190	186,913	100%
2018	61.5%	177,898	109,434	177,822	99.9%
2019	61.1%	185,840	113,536	185,840	185,840

Trend over time by Component and Report Year

	2016	2017	2018	2019
BP <140/90	85.0%	84.1%	83.5%	83.7%
Aspirin Use	96.7%	93.6%	93.3%	92.5%
Tobacco Free	83.0%	82.5%	82.4%	82.4%
Statin Use	94.7%	90.9%	91.6%	91.6%

Disparities

Optimal Vascular Care Rates by Race as Compared to Statewide Average in 2029

Race	2014	2016	2019
White	50.8%	67.2%	62.7%
Black/ African American	35.5%	47.6%	44.8%
Asian	54.4%	70.6%	67.7%
Multi-Racial	42.6%	53.4%	49.7%
Amer Ind/Alask Native	34.6%	51.8%	45.1%
Nat Hawaii/Pacific Isl	50.0%	71.4%	55.2%
Hispanic	48%	66%	57.5%
Non-Hispanic	50%	67%	62.0%

Measure rates by race and ethnicity demonstrate disparity and continued opportunity for improvement and reducing the gap in care and outcomes.

Questions for the Committee:

- Specific questions on information provided for gap in care.
- Is there a gap in care that warrants a national performance measure?

Preliminary rating for opportunity for improvement: ☒ High ☐ Moderate ☐ Low ☐ Insufficient

RATIONALE:

1c. Composite – Quality Construct and Rationale

Maintenance measures – same emphasis on quality construct and rationale as for new measures.

1c. Composite Quality Construct and Rationale. The quality construct and rationale should be explicitly articulated and logical; a description of how the aggregation and weighting of the components is consistent with the quality construct and rationale also should be explicitly articulated and logical.

This measure is an all-or-none composite (e.g., all essential care processes received, or outcomes experienced, by each patient)The desired goal is for the patient to achieve multiple intermediate physiological clinical outcome and medication use targets to best reduce their overall risk of developing further ischemic vascular complications (short and long term) or an additional cardiovascular event. The developer states that reducing modifiable risks was the reason why this measure was developed. The components of this measure include blood pressure control, appropriate use of statins, appropriate use of daily aspirin or anti-platelet medication, and being tobacco-free.

The numerator is calculated at the patient level and numerator compliance is defined as the patient achieving all four components of the measure. The components are weighted equally.

The developer states that achieving all components of the measure results is more likely to results in an overall risk reduction for cardiovascular complications. In addition, reporting all components together is a patient-centered approach to reporting. Individual components of the measure may be reported separately or used for quality improvement.

Questions for the Committee:

- Are the quality construct and a rationale for the composite explicitly stated and logical?
- Is the method for aggregation and weighting of the components explicitly stated and logical?

Preliminary rating for composite quality construct and rationale:
☒ High ☐ Moderate ☐ Low ☐ Insufficient

RATIONALE:

Committee Pre-evaluation Comments:
Criteria 1: Importance to Measure and Report (including 1a, 1b, 1c)

1a. Evidence

- Strong evidence level for each of the 4 components for vascular care outcomes
- yes
- no comments
- Existing measure. Updated evidence including a Cochrane Review and 8 RCTs for HTN control. Statin use 2 guidelines from 2013. Tobacco cessation - new evidence was related to an intervention (5 As) leading to increased quit rates NOT decreased IVD or events. ASA evidence updated - ACC's 2018 Guide to Primary & Secondary Prev. of ASCVD. Evidence is moderate

- Strong evidence, but no QQC for updated evidence, so moderate (but overall seems high).
- Strong evidence that this process measure is associated with desired outcomes.
- Strong evidence to support this composite measure
- high
- no concerns about evidence
- The evidence is moderate. I don't think we need a repeat discussion.

1b. Performance Gap

- Large gap on the composite outcome
- none
- no comments
- There is a significant composite performance gap, while individual components of the measure seem to be topped out between 82 and 93%. There are demonstrated disparities. Highest performance measure rates in Asians and Whites and lowest in Black and American Indian/Alaska Native
- Significant performance gap. Strong opportunity for improvement
- Still a significant performnace gap, unclear how much is provider driven vs socio-economic-demographic
- Statewide averages are not changing over time, however, there is still room for improvement. Really appreciate the indepth review and breakdown on disparities and how this has shown changes over time.
- high
- not a lot of improvement over the years, performance gap and disparities persist
- There is a clear performance gap overall and particularly for African Americans

1c. Composite Performance Measure

- Quality construct makes sense. Though mutability of all outcomes within the composite is not equal. Smoking status in particular is less mutable and may be worse among racial/ethnic minorities (not adjusted for)
- yes
- Overall the construct is logical.
- Strong overall. High.
- Well constructed overall. Agree with scientific evidence panel questions about why e-cigarettes and mortality are excluded.
- The quality construct makes sense and is consistent with our measures from MNMC. This would provide harmonization across the state.
- high
- yes
- I agree that the quality construct is high

Criteria 2: Scientific Acceptability of Measure Properties

2a. Reliability: Specifications and Reliabilit

2b. Validity: Testing; Exclusions; Risk-Adjustment; Meaningful Differences; Comparability; Missing Data

2c. For composite measures: empirical analysis support composite approach

Reliability

2a1. Specifications requires the measure, as specified, to produce consistent (reliable) and credible (valid) results about the quality of care when implemented. For maintenance measures – no change in emphasis – specifications should be evaluated the same as with new measures.

2a2. Reliability testing demonstrates if the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise enough to distinguish differences in performance across providers. For maintenance measures – less emphasis if no new testing data provided.

Validity

2b2. Validity testing should demonstrate the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality. For maintenance measures – less emphasis if no new testing data provided.

2b2-2b6. Potential threats to validity should be assessed/addressed.

Composite measures only:

2d. Empirical analysis to support composite construction. Empirical analysis should demonstrate that the component measures add value to the composite and that the aggregation and weighting rules are consistent with the quality construct.

Complex measure evaluated by Scientific Methods Panel? ☒ **Yes** ☐ **No**

Evaluators: NQF Scientific Methods Panel Subgroup

Methods Panel Review (Combined)

Methods Panel Evaluation Summary:

This measure was reviewed by the Scientific Methods Panel and discussed on the call. A summary of the measure and the Panel discussion is provided below.

Reliability

- **H-5; M-3; L-1; I-0** → Measure passes with HIGH rating
    - Reliability testing conducted at the measure score level using signal to Noise analysis (Adams' method) = 0.809

Validity

- **H-3; M-3; L-2; I-1** → Measure passes
    - Validity testing conducted at the score level by correlating the measure with other diabetes care measures.

- While the reviewers questioned some of the assumptions made regarding the relationship between this measure and the comparators, they generally agreed the measure was valid.
- Other reviewers raised concerns with a lack of clear validation results for the risk adjustment model

Composite Construct

- **H-3; M-3; L-1; I-1** → Measure passes
  - Reviewers generally agreed the composite construct was valid, but did express concerns regarding the need for further analysis on the composite construct that would validate the composite on data collected since last endorsement.

Questions for the Committee regarding reliability:

- Do you have any concerns that the measure can be consistently implemented (i.e., are measure specifications adequate)?
- The Scientific Methods Panel is satisfied with the reliability testing for the measure. Does the Committee think there is a need to discuss and/or vote on reliability?

Questions for the Committee regarding validity:

- Do you have any concerns regarding the validity of the measure (e.g., exclusions, risk-adjustment approach, etc.)?
- The Scientific Methods Panel is satisfied with the validity analyses for the measure. Does the Committee think there is a need to discuss and/or vote on validity?

Questions for the Committee regarding composite construction:

- Do you have any concerns regarding the composite construction approach (e.g., do the component measures fit the quality construct and add value to the overall composite? Are the aggregation and weighting rules consistent with the quality construct and rationale while achieving the related objective of simplicity to the extent possible?)?
- The Scientific Methods Panel is satisfied with the composite construction. Does the Committee think there is a need to discuss and/or vote on the composite construction approach?

Preliminary rating for reliability: ☒ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**

Preliminary rating for validity: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Preliminary rating for composite construction: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Committee Pre-evaluation Comments:
Criteria 2: Scientific Acceptability of Measure Properties (including all 2a, 2b, and 2c)

2a. Reliability

- No issues
- yes
- no comments
- Complex measure that went to Methods Panel - signal to noise 0.809
- Strong specifications.
- No issues
- Aligned with teh NQF and Scientific Method Panel assessment.

- moderate
- no concerns
- Methods Panel concluded high, I agree
- No issues
- no
- none
- No concerns
- Methods Panel review with high rating.
- No
- Aligned with teh NQF and Scientific Method Panel assessment.
- moderate
- no
- No concerns

2b. Validity

- While ADI type adjust seems to be done, adjustment for patient SES/race/ethnicity is not. Without this, I wonder about smoking status result in particular marking performance appear worse for providers caring for vulnerable populations
- no
- none
- Scientific Method Panel satisfied with construction of measure - okay
- Methods Panel review with moderate rating (pass).
- No
- Aligned with teh NQF and Scientific Method Panel assessment.
- moderate
- no
- No concerns; correlates with diabetes measure
- N/A
- no
- no comments
- The 95% confidence interval is very narrow - less than 1%. All the data is centered around 66% performance level. Not much variation.
- None.
- Attempts at socio-economic risk adjustment for individual clinics and providing an O/E ratio makes sense. I defer details to the Scientific Evidence panel
- Aligned with teh NQF and Scientific Method Panel assessment.
- moderate
- no concerns
- No significant threats to validity
- Risk adjustment as above does not appear to adjust for member race/ethnicity, which may have a particularly large impact on the smoking outcome within the composite
- no

- no comment
- There is risk adjustment. Depending on Scientific Methods Group here
- Unknown.
- See above comments
- Aligned with teh NQF and Scientific Method Panel assessment.
- moderate
- no concerns
- This is not risk adjusted.

2c. Composite Performance Measure

- See above
- yes
- no comment
- No discussion of weighting. Methods Panel satisfied.
- Methods Panel review with moderate rating (pass).
- Yes
- Aligned with teh NQF and Scientific Method Panel assessment.
- yes
- I don't have concerns about the construction of the measure

Criterion 3. Feasibility

Maintenance measures – no change in emphasis – implementation issues may be more prominent

3. Feasibility is the extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

- All data elements are in defined fields in electronic health records.
- The developer reported lessons learned over several years of operational use about data submission, providing detailed specifications, audit methods, patient confidentiality, EHR's, data collection burden, and the impact of health plans on the number of medical groups reporting this measure.
- There are no fees associated with participation and submitting data for this measure to MNCM. There are costs associated with data extraction and abstraction.

Questions for the Committee:

- Are the required data elements routinely generated and used during care delivery?
- Are the required data elements available in electronic form, e.g., EHR or other electronic sources?

Preliminary rating for feasibility: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

RATIONALE:

Committee Pre-evaluation Comments:
Criteria 3: Feasibility

- No concerns. Already part of public reporting
- none

- no comments
- Data elements are commonly found in charts. Exceptions might be a little more difficult to find. Moderate feasibility
- Moderate based on information provided.
- Feasible and proven over years.
- measure doesn't seem to have undue burden. Is operationalized similar to other MNCM measures
- moderate
- no concerns
- All of the data elements are collected during routine care, but some manual chart review may be required.

Criterion 4: Usability and Use

Maintenance measures – increased emphasis – much greater focus on measure use and usefulness, including both impact/improvement and unintended consequences

4a. Use (4a1. Accountability and Transparency; 4a2. Feedback on measure)

4a. Use evaluate the extent to which audiences (e.g., consumers, purchasers, providers, policymakers) use or could use performance results for both accountability and performance improvement activities.

4a.1. Accountability and Transparency. Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

Current uses of the measure

Publicly reported? ☒ **Yes** ☐ **No**

Current use in an accountability program? ☒ **Yes** ☐ **No** ☐ **UNCLEAR**

Accountability program details

- Public reporting:
  - MN Community Measurement- MN HealthScores Website.
  - Health Care Quality Report
  - Quality of Care for Chronic Conditions in Minnesota
- Payment:
  - HealthPartners Partners in Quality Program
- Regulatory and Accreditation Programs:
  - Minnesota Statewide Quality Reporting and Measurement System (SQRMS).
- Professional Certification or Recognition Program
  - MN Department of Health Health Care Homes Certification & Recertification
- Quality Improvement with Benchmarking (external benchmarking to multiple organizations):
  - MN Department of Health Health Care Homes Performance Measurement and Evaluation

4a.2. Feedback on the measure by those being measured or others. Three criteria demonstrate feedback: 1) those being measured have been given performance results or data, as well as assistance with interpreting the

measure results and data; 2) those being measured and other users have been given an opportunity to provide feedback on the measure performance or implementation; 3) this feedback has been considered when changes are incorporated into the measure

Feedback on the measure by those being measured or others

1) Medical groups participating in this measure receive preliminary results during a review period. Rates are then publicly reported. Participants may access all historical rates through the data portal. The developer provides recorded webinars that review the measure's specification, calculation, and results. Education and explanations are also provided in printed annual reports.
2) The developer provides a support line and seeks formal public comment as part of the measure development process. It also conducts an annual survey and all clinics in the state are invited to participate and provide feedback.
3) The developer reports two re-design efforts for the measure, both of which involved a multi-stakeholder development workgroup and used a consensus-based process.

Additional Feedback:

***Questions for the Committee**:*

- How have (or can) the performance results be used to further the goal of high-quality, efficient healthcare?
- How has the measure been vetted in real-world settings by those being measured or others?

Preliminary rating for Use: ☒ **Pass** ☐ **No Pass**

4b. Usability (4a1. Improvement; 4a2. Benefits of measure)

4b. Usability evaluate the extent to which audiences (e.g., consumers, purchasers, providers, policymakers) use or could use performance results for both accountability and performance improvement activities.

4b.1 Improvement. Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated.

Improvement results

The developer provided Minnesota statistics and noted since the start of public reporting of this measure in 2007, there has been steady improvement in composite rates for achieving all targets. The statewide average has improved from 38.9% to 61.1%. Even with this improvement, there is continued demonstration of variability and opportunity for improvement.

4b2. Benefits vs. harms. Benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

Unexpected findings (positive or negative) during implementation

- The developer reports that it has been beneficial to see the slow steady improvement on a statewide basis. The developer moved away from the historical "visit-counting" method and saw an appropriate increase in the denominator (that was previously artificial because patients truly did have ischemic vascular disease). At the same time, the numerator rates did not change significantly, demonstrating patients were achieving optimal targets.

Potential harms

- The developer did not identify any unintended consequences during the testing, implementation, and ongoing review of this measure.

Additional Feedback:

***Questions for the Committee**:*

- Are you aware of any unintended consequences related to this measure?
- Do the benefits of the measure outweigh any potential unintended consequences?

Preliminary rating for Usability and use: ☒ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**

RATIONALE:

Committee Pre-evaluation Comments:
Criteria 4: Usability and Use

4a. Use

- No issues
- yes
- no comments
- Existing measure. Publicly reported. Used for payment and accreditation. No mention of ability of monitored providers to provide feedback to developer
- Pass. Used in multiple accountability programs.
- Used and endorsed by MN community, more pateints and higher percentage of eligible patients included every year.
- focused specifically in MN-based programs. No major concerns
- moderate
- no concerns
- The measure is publicly reported and used in payment programs

4b. Usability

- None
- none
- no comments
- No identified harms although with the low performance rates there may have been an economic penalty
- High usability rating.
- Usable, no harms identified as each clinic is compared to itself and those taking care of less advantaged populations are not held accountable for patient demographics
- no major concerns
- moderate
- no concerns
- No harms have been identified

Criterion 5: Related and Competing Measures

Related or competing measures

The developer identified these measures as related:

0067: Coronary Artery Disease (CAD): Antiplatelet Therapy

0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet

0073: Ischemic Vascular Disease (IVD): Blood Pressure Control

NQF Staff identified an additional related measure:

0018: Controlling High Blood Pressure

Harmonization

The developer notes **the measure specifications are not harmonized to the extent possible**. 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 was removed from the related list because although related, the measure's endorsement was removed in 2015.

Committee Pre-evaluation Comments: Criterion 5: Related and Competing Measures

- No issues
- no
- no
- Multiple related measures 0067 Antiplatelet; 0068 ASA or Antiplatelet; 0073 BP control in IVD; 0018 BP This measure takes a more holistic approach to secondary prevention
- Related measures, but NOT harmonized. Should be discussed by committee.
- Appears to be relatively harmonized with individual component measures.
- algined with the measures not harmonized, but does not seem to be competing. May need to review value sets.
- no
- harmonized to the degree possible
- There are related measures but they don't compete directly

Public and Member Comments

Comments and Member Support/Non-Support Submitted as of: June 12, 2020

- **No NQF Members have submitted support/non-support choices as of this date.**
- **No Public or NQF Member comments submitted as of this date.**

Measure Number: 0076

Measure Title: Optimal Vascular Care

Type of measure:

☒ **Process** ☐ **: Appropriate Use** ☐ **Structure** ☐ **Efficiency** ☐ **Cost/Resource Use**

☒ **Outcome** ☒ **Outcome: PRO-PM** ☐ **Outcome: Intermediate Clinical Outcome** ☒ **Composite**

Panel Member #1: (all or none)

Panel Member #10: Composite all-or-none intermediate outcome. Patients with ischemic vascular disease (IVD); The components of this measure include blood pressure control, being tobacco-free, appropriate use of statins and daily aspirin or anti-platelet.

Data Source:

☐ **Claims** ☐ **Electronic Health Data** ☒ **Electronic Health Records** ☐ **Management Data**
☐ **Assessment Data** ☒ **Paper Medical Records** ☐ **Instrument-Based Data** ☐ **Registry Data**
☐ **Enrollment Data** ☐ **Other**

Level of Analysis:

☒ **Clinician: Group/Practice** ☐ **Clinician: Individual** ☐ **Facility** ☐ **Health Plan**
☐ **Population: Community, County or City** ☐ **Population: Regional and State**
☐ **Integrated Delivery System** ☐ **Other**

Measure is:

☐ **New** ☒ **Previously endorsed (**NOTE: Empirical validity testing is expected at time of maintenance review; if not possible, justification is required.)

Panel Member #10: 99 medical groups/677 physicians/185K patients

RELIABILITY: SPECIFICATIONS

1. **Are submitted specifications precise, unambiguous, and complete so that they can be consistently implemented?** ☒ **Yes** ☒ **No**

   Submission document: "MIF_xxxx" document, items S.1-S.22

   NOTE*: NQF staff will conduct a separate, more technical, check of eCQM specifications, value sets, logic, and feasibility, so no need to consider these in your evaluation.*

   Panel Member #4: See response to #2 below for rationale.

2. **Briefly summarize any concerns about the measure specifications.**

   Panel Member #1: No concerns. I found the measure specifications very clear.

   Panel Member #2: No concerns.

   Panel Member #3: No concerns.

   Panel Member #4: In the MIF, a denominator exclusion in S.9 states "permanent nursing home resident at any time during the measurement period". However, how this is defined is not stated here nor in the XL file in the pkt we received. For example, how is a short-term nursing home stay resident/case defined differently than a "permanent nursing home resident"? In the MIF, a denominator exclusion in S.9 states "hospice or receiving palliative care at any time during the measurement period". Note the XL file in the pkt we received defines palliative care, but not hospice care.

Panel Member #5: Statin use is "if appropriate and no contraindications/exceptions." Are appropriateness of statins so clear? The specifications do not address TC:HDL ratio, and, to my knowledge, there is no evidence of reduced CVD/IVD rates with lower LDL levels once low TC:HDL ratios are achieved. Tobacco status is as documented in the past 2 years. What is the validity of this definition and ascertainment strategy?

Panel Member #7: None, however the specifications are complex.

Panel Member #8: No concerns. I like the changes for: 1) determining an "established patient"; and 2) the addition of the deprivation index to the risk adjustment model. However, one question I have is why are ecigarettes not considered tobacco products?

RELIABILITY: TESTING

Panel Member #10: Used beta-binomial model to estimate reliability (0.81) which is excellent overall. It is unclear what the case number threshold is for reliability to be > 0.7.

Submission document: "MIF_xxxx" document for specifications, testing attachment questions 1.1-1.4 and section 2a2

3. **Reliability testing level** ☒ **Measure score** ☐ **Data element** ☐ **Neither**
4. **Reliability testing was conducted with the data source and level of analysis indicated for this measure** ☒ **Yes** ☒ **No**
5. If score-level and/or data element reliability testing was NOT conducted or if the methods used were NOT appropriate, was **empirical <u>VALIDITY</u> testing** of <u>patient-level data</u> conducted?

   ☒ **Yes** ☐ **No**

   Panel Member #4: c score level reliability testing conducted
6. **Assess the method(s) used for reliability testing**

   Submission document: Testing attachment, section 2a2.2

   Panel Member #1: The STN analyses was used based on the Adams tutorial for score level reliability.

   Panel Member #2: Adams' "reliability in provider profiling" (2016)

   Panel Member #3: Calculated reliability using a beta-binomial model, which is outlined in a paper by John Adams.

   Panel Member #4: "Determine reliability rate for each provider" and "Average the reliability rate." [p7]

   Panel Member #5: BetaBinomial - Fine, 0.81 (approximately 0.4 with n=30 patient minimum). I was not able to learn what the distribution of Ns is across clinics reporting this measure.) I rate as Moderate but could go HIGH if I learn more about this.

   Panel Member #7: Appropriate

   Panel Member #8: Reliability was tested using a signal to noise ratio. The result was 0.9.

   Panel Member #9: Beta-binomial method was appropriately used.

   Panel Member #10: Used beta-binomial model to estimate reliability (0.81) which is excellent overall. It is unclear what the case number threshold is for reliability to be > 0.7.
7. **Assess the results of reliability testing**

   Submission document: Testing attachment, section 2a2.3

   Panel Member #1: Reliability results are presented only for providers with at least 30 cases. Does this explain the differences in sample size of clinics and patients between those included in this testing (567 clinics/176 273 patients) and the full population (667 clinics/185 840 patients)? If so, this should be

explained in section 1.7 (differences in the data or sample used for different aspects of testing). Additionally, was the developers' intention that 30 cases be the minimum threshold for acceptable reliability? Please clarify.

Panel Member #3: **Panel Member #3**: 019 update (2018 analysis of 2017 service dates): rel =0.81

Panel Member #3: Reliability calculation yielded a more recent value of 0.809, a value that is considered to be acceptable

Panel Member #4: "Reliablity = 0.809 (n= 567 clinics with 176,273 observations)" [p9]. For reliability. by denominator number, see figure on p 9 with red border.

Panel Member #7: Adequate for large clinics, however reliability for clinics with about ≤ 50 patients appears to drop below .70.

Panel Member #8: The result was 0.9. I have no concerns with the methods used and the results indicate high reliability.

Panel Member #9: Showing the relationship of reliability to the number of patients per clinic was very useful, and demonstrated that reliability was adequate for 30 patients per group and above.

Panel Member #10: Used beta-binomial model to estimate reliability (0.81) which is excellent overall. It is unclear what the case number threshold is for reliability to be > 0.7.

8. Was the method described and appropriate for assessing the proportion of variability due to real differences among measured entities? NOTE: If multiple methods used, at least one must be appropriate.

   Submission document: Testing attachment, section 2a2.2

   ☒ **Yes**

   ☐ **No**

   ☐ **Not applicable** (score-level testing was not performed)

9. Was the method described and appropriate for assessing the reliability of ALL critical data elements?

   Submission document: Testing attachment, section 2a2.2

   ☒ **Yes**

   ☐ **No**

   ☒ **Not applicable** (data element testing was not performed)

   Panel Member #2: Not clear why they did not test reliability of critical data elements

10. **OVERALL RATING OF RELIABILITY** (taking into account precision of specifications and <u>all</u> testing results):

    ☒ **High** (NOTE: Can be HIGH <u>only if</u> score-level testing has been conducted)

    ☒ **Moderate** (NOTE: Moderate is the highest eligible rating if score-level testing has <u>not</u> been conducted)

    ☒ **Low** (NOTE: Should rate <u>LOW</u> if you believe specifications are NOT precise, unambiguous, and complete or if testing methods/results are not adequate)

    ☐ **Insufficient** (NOTE: Should rate <u>INSUFFICIENT</u> if you believe you do not have the information you need to make a rating decision)

11. **Briefly explain rationale for the rating of OVERALL RATING OF RELIABILITY and any concerns you may have with the approach to demonstrating reliability.**

    Panel Member #1: Methods and interpretation seem appropriate, therefor the 'high' rating. However, as noted above, results pertain only to providers with at least 30 patients and some clarifications would be helpful.

    Panel Member #2: Reliability of score was very good (0.81), but would be nice to see component reliabilities

Panel Member #3: Score-level reliability value was 0.809, which is considered to be acceptable

Panel Member #4: See response to #1 & #2 above for the response that specifications are not precise, unambiguous & complete (#1) & the rationale (#2). Note, if the specifications were adequate, reliability would have been 'high' based on testing results noted in #7 above.

Panel Member #5: Above – in red.

Panel Member #7: For the 99 practices reported for the 2019 submission it would help considerably to plot the results of GEE analysis to estimate the magnitude of within vs. bewtween practice variation and/or report ICC for clinics with >100 vs ≤ 100 patients.

Panel Member #8: No concerns.

Panel Member #10: Used beta-binomial model to estimate reliability (0.81) which is excellent overall. It is unclear what the case number threshold is for reliability to be > 0.7. Note that the excellent reliability of this measures may be caused, in part, by inadequate risk adjustment (if this is present).

VALIDITY: ASSESSMENT OF THREATS TO VALIDITY

Panel Member #10: Assessed data validity through data audits. Assessed score-level validity by evaluating correlation between group performance on measure and performance on diabetes care measure, which showed good correlation (rsq = .64).

Risk adjustment model (hierarchical logistic regression model) is based on age, insurance, and zip-code level deprivation index. Observed and expected results are estimated, and the significance is based on chi square test. Prior model included gender, depression and distance from clinic. Some of the left out variables in the 2019 model had large effect sizes in the prior model. Not including these risk factors may lead to inadequate risk adjustment. It is also not clear why other comorbidities were not included. A priori, it would seem that sicker patients would be more likely to fail this measure because of competing needs, and that the risk adjustment model should adjust for this. It is not sufficient to state that a risk factor, such as gender, shows insufficient variation across clinics to justify decision to leave a risk factor out. The original model was already extremely parsimonious and a priori would not be expected to adequately adjust for patient complexity. Finally, is the association between age and outcome linear? Why was the specification for age changed from categorical to linear?

Evaluated validity of composite measure by examining the correlation of the composite measure with performance on optimal diabetes care. Rsq = 63%

12. **Please describe any concerns you have with measure exclusions.**

Submission document: Testing attachment, section 2b2.

Panel Member #1: There is no description of rates of excluded cases per exclusion category for the 2019 submission. low rates of exclusions for previous submissions suggest that exclusions do not pose a threat to validity, but since there was a significant change in the denominator criteria with a 43% increase in the denominator, this should be retested. Also, there is no actual exclusion testing reported. Are these exclusions justified other than their face validity? This question may be mostly appropriate for nursing home residents, and patients above 75.

Panel Member #2: No concern

Panel Member #3: No concerns; low rate of excluded patients (1.2%) and exclusions are clinically relevant

Panel Member #4: Disagree with excluding people who have deceased. Rationale is that death may be due to poor quality care, and it is quality that we are measuring. Thus, we should avoid excluding cases that may inform the quality measure. Having said this, in the 2016 analysis [p13], 918 of 104,395 were excluded due to death, which is only 0.9% of cases.

Panel Member #7: None are reported for the 2019 submission

Panel Member #8: Exclusions include those: permanently in nursing homes; receiving palliative care; and who died prior to the end of the measurement period. I have no concerns with these exclusions.

Panel Member #9: No concerns

13. **Please describe any concerns you have regarding the ability to identify meaningful differences in performance.**

Submission document: Testing attachment, section 2b4.

Panel Member #1: The updated distribution graph for the performance rates in 2019 is a frequency distribution, not a percent distribution, therefore not directly comparable to the 2016 graph. Although the distributions seem overall similar, some notable differences may be observed which could benefit from some interpretation regarding change in performance over time. Specifically, there seem to be more clinics in the lower rate categories in 2019, as is also noted by a decrease in the statewide performance rate from 66.1% (2016) to 61.6% (2019). Are there assumed reasons for this decrease? Since this is a maintenance submission, some interpretation of performance over time would be appropriate.

Panel Member #2: No concern

Panel Member #3: No concerns. See a distribution of performance across clinics.

Panel Member #4: Given the variation expressed in the results noted in the figure on p 33 (based on 2019 analysis), no concerns with the measure's ability to show variation in provider performance.

Panel Member #7: It is not clear that the absolute standard of a 2% difference between observed over expected rates has the same meaning (i.e. accounts for error appropriately) by variation in clinic size.

Panel Member #8: A wide range of results is demonstrated. I have no concerns.

Panel Member #9: No concerns

14. **Please describe any concerns you have regarding comparability of results if multiple data sources or methods are specified.**

Submission document: Testing attachment, section 2b5.

Panel Member #1: NA

Panel Member #2: NA

Panel Member #3: Not applicable.

Panel Member #4: Given the variation expressed in the results noted in the figure on p 33 (based on 2019 analysis), no concerns with the measure's ability to show variation in provider performance.

Panel Member #7: None

Panel Member #8: No concerns.

Panel Member #9: No concerns. So many practices now use electronic records measures based on paper review are almost non-existent.

15. **Please describe any concerns you have regarding missing data.**

Submission document: Testing attachment, section 2b6.

Panel Member #1: Elements from any component are counted as a numerator component fail and remain in the denominator

Panel Member #2: No change since 2016

Panel Member #3: Minimal missing data.

Panel Member #4: No concerns.

Panel Member #7: None

Panel Member #8: Missing data seems minimal and I'm impressed with the auditing techniques and the fact that over the years, the database has become so complete.

Panel Member #9: No concerns

16. **Risk Adjustment**

Panel Member #4: 2b3.

16a. **Risk-adjustment method** ☐ **None** ☒ **Statistical model** ☐ **Stratification**

16b. **If not risk-adjusted, is this supported by either a conceptual rationale or empirical analyses?**

☐ Yes ☐ No ☒ Not applicable

16c. **Social risk adjustment:**

16c.1 Are social risk factors included in risk model? ☒ Yes ☐ No ☐ Not applicable

Panel Member #2: New for 2019 (deprivation index)

Panel Member #4: 2b3.3a

16c.2 Conceptual rationale for social risk factors included? ☒ Yes ☐ No

Panel Member #4: 2b3.3a

16c.3 Is there a conceptual relationship between potential social risk factor variables and the measure focus? ☒ Yes ☐ No

Panel Member #10: Used zip-code level deprivation index.

16d.**Risk adjustment summary:**

Panel Member #5: **Age, insurance product, and deprivation index** risk factors (zipcode **-** the percentage of people in that 5-digit zip code with SNAP benefits, in poverty, unemployed, on public assistance and single females with children using US Census Data.)

16d.1 All of the risk-adjustment variables present at the start of care? ☒ Yes ☒ No

Panel Member #5: Unknown whether deprivation index exists at all.

16d.2 If factors not present at the start of care, do you agree with the rationale provided for inclusion?

☒2b3.3a, 2b3.3b. ☒ Yes ☐ No

Panel Member #4: NA – risk factors present at start of care

16d.3 Is the risk adjustment approach appropriately developed and assessed?

2b3.4b, 2b3.5 ☒ Yes ☒ No

16d.4 Do analyses indicate acceptable results (e.g., acceptable discrimination and calibration)

2b3.6, 2b3.7, 2b3.8, 2b3.9, 2b3.10

☒ Yes ☒ No

Panel Member #4: Given the measure steward states red text in the testing form is regarding the 2019 maintenance, I am not seeing adequate aggregate risk adjustment testing results in regard to 2019 maintenance. We see some individual risk factor testing results (e.g. p. 24, 25), but not how well the risk adjustment is performing on the whole. Regarding the individual risk factor testing results are mixed. Examples: p. 24: T test results are adequate; p. 25: Pearson correlations are weak. The 2019 maintenance is presented in red text (& figures/tabes with red borders) on pages 24, 25, 26, 27, 29

16d.5.Appropriate risk-adjustment strategy included in the measure? ☒ Yes ☒ No

16e**. Assess the risk-adjustment approach**

Panel Member #1: No concerns

Panel Member #1: Improved since 2016 submission

Panel Member #3: I was not able to find any description of risk model discrimination statistics in section 2b3.6.

Panel Member #4: Given the measure steward states red text in the testing form is regarding the 2019 maintenance, I am not seeing adequate aggregate risk adjustment testing results in regard to 2019 maintenance. We see some individual risk factor testing results (e.g. p. 24, 25), but not how well the risk adjustment is performing on the whole (i.e. at the measure level, at the composite level).Regarding the

individual risk factor testing results are mixed. Examples:-p. 24: T test results are adequate;-p. 25: Pearson correlations are weak. 2019 maintenance is presented in red text (& figures/tables with red borders) on pages 24, 25, 26, 27, 2

Panel Member #5: **"**Instead, an expected value is calculated for each clinic using the logistic regression model run at the patient level and results are aggregated to the clinic level as described above. In this process, the clinics are not to be compared to the state or regional average but instead to their own expected rate. Comparisons between clinics are achieved with a calculation of actual result/expected result and significance testing is performed by using a chi square test."

RELO variables are not included "because it is impossible to separate the disparity in outcome between the patient's environment and the clinic's contribution to the disparity specific biases from healthcare providers that influence their interactions with patients." Why are RELO different from Deprivation Index?

I do not understand either of these comments. I defer on 16d.5 re: SES adjustment**.**

Panel Member #8: No concerns. I like the addition of the deprivation index.

Panel Member #9: Very thoughtful analysis

Panel Member #10: Risk adjustment model (hierarchical logistic regression model) is based on age, insurance, and zip-code level deprivation index. Observed and expected results are estimated, and the significance is based on chi square test. Prior model included gender, depression and distance from clinic. Some of the left out variables had large effect sizes. Not including these risk factors (2019 model) may lead to inadequate risk adjustment. It is also not clear why other comorbidities were not included. A priori, it would seem that sicker patients would be more likely to fail this measure because of competing needs, and that the risk adjustment model should adjust for this. It is not sufficient to state that a risk factor, such as gender, shows insufficient variation across clinics to justify decision to leave a risk factor out. The original model was already extremely parsimonious and a priori would not be expected to adequately adjust for patient complexity. Measure developer does not report model performance.

For cost/resource use measures ONLY:

17. **Are the specifications in alignment with the stated measure intent?**

    ☐ Yes ☐ Somewhat ☐ No (If "Somewhat" or "No", please explain)

18. **Describe any concerns of threats to validity related to attribution, the costing approach, carve outs, or truncation (approach to outliers):**

VALIDITY: TESTING

19. **Validity testing level: ☒ Measure score ☒ Data element ☒ Both**
20. **Method of establishing validity of the measure score:**

    ☒ Face validity

    ☒ Empirical validity testing of the measure score

    ☐ N/A (score-level testing not conducted)

21. **Assess the method(s) for establishing validity**

    Submission document: Testing attachment, section 2b1.2

    Panel Member #1: (NQF staff - this should be 2b1.2 – yes?) Methods are appropriate. However, there is no mentioning of data element validity testing per each of the four critical data elements (i.e., BP, Cholesterol/ Statin, Tobacco-Free use and Aspirin/ Anti-platelet) separately. It would be informative to see these stratified testing results. However, since a large percent of clinics were audited, and all of those identified with errors submitted corrections, this is a minor point in lieu of supporting data element validity. For score level validity, the same method was used as for the 2016 maintenance submission, i.e., correlation of with Optimal Diabetes Care measure (NQF# 0729). My only minor concern is that the sample

used for this analyses was not described. Were all clinics and patients included? Or, as noted for the 2016 submission, were only clinics with >=30 cases included, and if so, why?

Panel Member #2: Only change from 2016 was removal of erroneous dx code

Panel Member #3: Conducted audits with clinics to ensure data accuracy; clinics with data errors make corrections and resubmit. For score-level validity, hypothesized that clinic performance on the OVC measure would be correlated with performance on the Optimal Diabetes Care measure

Panel Member #4: Data element testing is reasonable/adequate. Regarding composite score testing, I disagree that we would expect to see a correlation between this composite & diabetes care. It is a different set of physicians caring for these two populations and as such we would not necessarily expect to see one group of physicians performing similarly to another set of physicians within a given medical group.

Data element: "…four steps: denominator certification, data quality checks, validation audit, and the two-week medical group review period…." [p10-11]

Composite score: "…testing the correlation of medical group performance with their performance on the Optimal Diabetes Care measure (NQF# 0729)…" [p11]

Panel Member #7: Adequate

Panel Member #8: For data element validity, the process is completed in four steps: denominator certification, data quality checks, validation audit, and the two-week medical group review period. In 2019, concurrent validity was tested by comparing the composite score to the performance on the Optimal Diabetes Care Measure.

Panel Member #9: Comparison with the diabetes composite is appropriate.

22. **Assess the results(s) for establishing validity**

    Submission document: Testing attachment, section 2b1.3, 2b1.4

    Panel Member #1: Results are satisfactory and very similar to those from 2016 for both data elements and score level validity.

    Panel Member #2: Face validity good and historical empirical evidence is supportive. I did not see results of any new testing.

    Panel Member #3: 85% of clinics pass initial audit**.** R-squared value of 0.63 for clinic performance on OVC measure and Optimal Diabetes Care

    Panel Member #4: Regarding data element testing (excerpt below), I'd suggest 15% of organizations failing the audit is unacceptable. Regarding composite score testing (excerpt below), while the r – squared figure is adequate, as noted above in response to Q21, I do not perceive this is an adequate test.

    Data element: "30% of groups that submitted data were audited and of those 85% passed initial audit; groups with errors made corrections and resubmitted…" [p11]

    Composite score: **"**2019 Submission… r^2 = 63%" [figure: p12] [p12]

    Panel Member #7: Adequate

    Panel Member #8: No concerns.

    Panel Member #9: Moderate correlations with the diabetes composite are expected and found.

23. **Was the method described and appropriate for assessing conceptually and theoretically sound hypothesized relationships?**

    Submission document: Testing attachment, section 2b1.

    ☒ **Yes**

    ☒ **No**

    ☐ **Not applicable** (score-level testing was not performed)

Panel Member #5: OK. 30% of groups that submitted data were audited and of those 85% passed initial audit; A medical group's performance on the Optimal Vascular Care measure is associated with its performance on the Optimal Diabetes Care measure.

Panel Member #4: Response to Q21: Regarding composite score testing, I disagree that we would expect to see a correlation between this composite & diabetes care. It is a different set of physicians caring for these two populations and as such we would not necessarily expect to see one group of physicians performing similarly to another set of physicians within a given medical group.

24. **Was the method described and appropriate for assessing the accuracy of ALL critical data elements?** *NOTE that data element validation from the literature is acceptable.*

    Submission document*: Testing attachment, section 2b1.*

    ☒ **Yes**

    ☒ **No**

    ☒ **Not applicable** (data element testing was not performed)

    Panel Member #1: The reason for the 'no' rating is that there was no description of testing for each data element separately. However, audits done addressed testing for numerator, denominator and exclusions so I do not think this is a fatal flaw, but recommend including this information for the sake of identifying data elements that may need more corrections/education than others.

25. **OVERALL RATING OF VALIDITY taking into account the results and scope of all testing and analysis of potential threats.**

    ☒ **High** (NOTE: Can be HIGH only if score-level testing has been conducted)

    ☒ **Moderate** (NOTE: Moderate is the highest eligible rating if score-level testing has NOT been conducted)

    ☒ **Low** (NOTE: Should rate LOW if you believe that there <u>are</u> threats to validity and/or relevant threats to validity were <u>not assessed OR</u> if testing methods/results are not adequate)

    ☐ **Insufficient** (NOTE: For instrument-based measures and some composite measures, testing at both the score level and the data element level <u>is required</u>; if not conducted, should rate as INSUFFICIENT.)

26. **Briefly explain rationale for rating of OVERALL RATING OF VALIDITY and any concerns you may have with the developers' approach to demonstrating validity.**

    Panel Member #1: Two main reasons for the moderate rating:

    1. No stratification of critical data element validity testing per data element
    2. Missing information on sample used for score level validity.
    3. Missing reporting on exclusion rate and missing testing to justify some criteria, especially excluding nursing home residents and patient above 75.

    Since I do not think either of these reasons pose a threat to the measure's validity, I rate validity as moderate and not insufficient. However, I encourage the developers to add the missing information mentioned here.

    Panel Member #2: 2019 submission seems to rely heavily on prior submissions and analyses with new risk adjustment support. Face validity good

    Panel Member #3: Score-level validity showed moderate relationship with other diabetes care measures

    Panel Member #4: Response to Q21: Data element testing is reasonable /adequate. Regarding composite score testing, I disagree that we would expect to see a correlation between this composite & diabetes care. It is a different set of physicians caring for these two populations and as such we would not necessarily expect to see one group of physicians performing similarly to another set of physicians within a

given medical group. Response to Q22: Regarding data element testing (excerpt below), I'd suggest 15% of organizations failing the audit is unacceptable. Regarding composite score testing (excerpt below), while the r – squared figure is adequate, as noted above in response to Q21, I do not perceive this is an adequate test.

Panel Member #5: Data audits, no gold standard. Measure validity OK ref with DM

Panel Member #7: The magnitude of between practice variation is difficult to interpret given the within vs. between practice variation.

Panel Member #8: No concerns.

Panel Member #9: Validity testing was appropriate and demonstrated an appropriate degree of correlation. I have no concerns.

Panel Member #10: The risk adjustment model was not validated.

FOR COMPOSITE MEASURES ONLY: Empirical analyses to support composite construction

27. **What is the level of certainty or confidence that the empirical analysis demonstrates that the component measures add value to the composite and that the aggregation and weighting rules are consistent with the quality construct?**

    ☒ **High**

    ☒ **Moderate**

    ☒ **Low**

    ☒ **Insufficient**

28. **Briefly explain rationale for rating of EMPIRICAL ANALYSES TO SUPPORT COMPOSITE CONSTRUCTION**

    Panel Member #1: Since this is an all-or-none composite measure, each component adds a critical value to the composite, and weighting is not relevant. The decision to create an all-or-none composite is clinically based and supported by clinical expertise. Having said that, it would be informative to updated the analyses done in 2016 for the performance over time per each data component. The main reason would be to see if the correlations observed previously between each component and the composite score level has changed over time in a manner that would justify a change in the composite structure. For example, has one of the components. topped out, e.g., daily aspirin use? If that has occurred, would developers consider a change in the composite structure? More information is needed to evaluate the developers' decision to not change the composite structure.

    Panel Member #2: I would have said high, but no knowledge of component reliability decreases my enthusiasm

    Panel Member #3: All or none measure, which the measure developers frame as being more patient-centric. Demonstrated that there is variance in adherence to individual components of the measure, but not component is topped out

    Panel Member #4: Responses & excerpted responses to above questions as rationale for 'low' rating"
    Response to 16e: Given the measure steward states red text in the testing form is regarding the 2019 maintenance, I am not seeing adequate aggregate risk adjustment testing results in regard to 2019 maintenance. We see some individual risk factor testing results (e.g. p. 24, 25), but not how well the risk adjustment is performing on the whole (i.e. at the measure level, at the composite level).
    Response to Q19, Q21: Regarding composite score testing, I disagree that we would expect to see a correlation between this composite & diabetes care. It is a different set of physicians caring for these two populations and as such we would not necessarily expect to see one group of physicians performing similarly to another set of physicians within a given medical group.
    Response to Q22: Regarding data element testing, I'd suggest 15% of organizations failing the audit is unacceptable.

    Panel Member #5: Correlation. Variability noted for BP and smoking (measurement error?).

Panel Member #8: The rationale was explained well and included scientific evidence for each component. No concerns.

Panel Member #9: Analysis shows an appropriate and expected degree of correlation between the composite measure and its four components.

ADDITIONAL RECOMMENDATIONS

29. **If you have listed any concerns in this form, do you believe these concerns warrant further discussion by the multi-stakeholder Standing Committee? If so, please list those concerns below.**

Panel Member #1: The only concern I would like to discuss is the one listed in #27/28, that is the missing analyses on composite structure over time up to 2019.

Panel Member #5: Although I have some a priori skepticism that smoking and BP control as measured reflect mainly quality of care (rather than baseline rates of disease or other social factors), my skepticism is outweighed by the considerable historical and dox inertia of this measure.

Panel Member #9: No concerns

Brief Measure Information

NQF #: 0076

Corresponding Measures:

De.2. Measure Title: Optimal Vascular Care

Co.1.1. Measure Steward: MN Community Measurement

De.3. Brief Description of Measure: 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

1b.1. Developer Rationale: The intermediate physiological and biochemical outcomes included in this composite measure along with the appropriate use of statins and daily aspirin or antiplatelets are modifiable lifestyle risk factors that can ultimately decrease the incidence of long term catastrophic events and chronic illness associated with cardiovascular disease.

S.4. Numerator Statement: 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

S.6. Denominator Statement: 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.

S.8. Denominator Exclusions: 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.

De.1. Measure Type: Composite

S.17. Data Source: Electronic Health Records, Paper Medical Records

S.20. Level of Analysis: Clinician : Group/Practice

IF Endorsement Maintenance – Original Endorsement Date: Aug 10, 2009 **Most Recent Endorsement Date:** Dec 08, 2016

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? This is a composite "all or none" measure calculated at the patient level, each individual patient needs to meet all four component targets to be considered in the numerator. All components are contained within this measure and the measure is not paired with another measure.

1a. Evidence (subcriterion 1a)

Measure Number (*if previously endorsed*)**:** 0076

Measure Title: Optimal Vascular Care

IF the measure is a component in a composite performance measure, provide the title of the Composite Measure here: Optimal Vascular Care NQF # 0076

Date of Submission: 3/24/2020

1a.1.This is a measure of: (*should be consistent with type of measure entered in De.1*)

Outcome

☐ Outcome: Click here to name the health outcome

☐ Patient-reported outcome (PRO): Click here to name the PRO

PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors. (A PRO-based performance measure is not a survey instrument. Data may be collected using a survey instrument to construct a PRO measure.)

☒ Intermediate clinical outcome (*e.g., lab value*): blood pressure less than 140/90

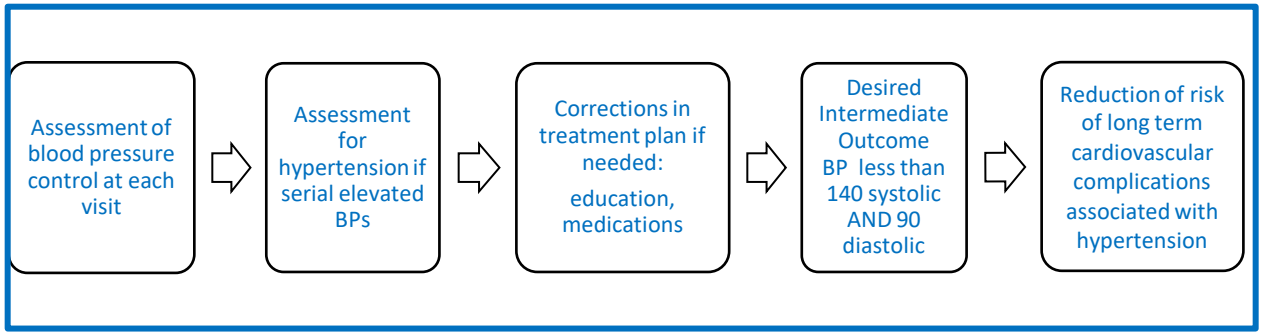
☐ Process: Click here to name what is being measured

☐ Appropriate use measure: Click here to name what is being measured

☐ Structure: Click here to name the structure

☒ Composite: Optimal Vascular Care

1a.2 LOGIC MODEL Diagram or briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.



1a.3 Value and Meaningfulness: IF this measure is derived from patient report, provide evidence that the target population values the measured ***outcome, process, or structure*** and finds it meaningful. (Describe how and from whom their input was obtained.)

Not applicable. Component is derived from clinical physiological data collected during office visit or clinical encounter.

****RESPOND TO ONLY ONE SECTION BELOW -EITHER 1a.2, 1a.3 or 1a.4) ****

1a.2 FOR OUTCOME MEASURES including PATIENT REPORTED OUTCOMES - Provide empirical data demonstrating the relationship between the outcome (or PRO) to at least one healthcare structure, process, intervention, or service.

1a.3. SYSTEMATIC REVIEW(SR) OF THE EVIDENCE (for INTERMEDIATE OUTCOME, PROCESS, OR STRUCTURE PERFORMANCE MEASURES, INCLUDING THOSE THAT ARE INSTRUMENT-BASED) If the evidence is not based on a systematic review go to section 1a.4) If you wish to include more than one systematic review, add additional tables.

What is the source of the systematic review of the body of evidence that supports the performance measure? A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data. (IOM)

☒ Clinical Practice Guideline recommendation (with evidence review)

☐ US Preventive Services Task Force Recommendation

☐ Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*)

☐ Other

Source of Systematic Review: • **Title** • **Author** • **Date** • **Citation, including page number** • **URL**	**Institute for Clinical Systems Improvement (ICSI)** **Guidelines for Management of Hypertension [Schwartz, G. et al] 2008, 2010 and Stable Coronary Artery Disease [Lehman, G. et al] 2011.** **URLs no longer active.** **American Heart Association, American College of Cardiology, and American Society of Hypertension Scientific Statement March 31 2015 Rosendorff C., Lackland D.T, et. al. on behalf of the American Heart Association, American College of Cardiology, and American Society of Hypertension** **Hypertension. 2015;65:1372-1407.** **http://hyper.ahajournals.org/content/65/6/1372.full.pdf+html** **Blood pressure targets for the treatment of people with hypertension and cardiovascular disease** **Saiz LC, Gorricho J, Garjón J, et al. Cochrane Database of Systematic Reviews 2018, Issue 7. Art. No.: CD010315. DOI:** **10.1002/14651858.CD010315.pub3.**

	https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD010315.pub3/full
Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the SR.	Goal office blood pressures should be less than 140/90 mmHg for adults with uncomplicated hypertension (in the absence of comorbidities). [Conclusion Grade II: See Conclusion Grading Worksheet A – Annotation #7 (Goal Blood Pressure for Patients with Cardiovascular Disease)]. The recommended target blood pressure is 140/90 mmHg or less. Based on current evidence, pursuing blood pressure goals lower than < 140/90 should be considered on an individual patient basis based on clinical judgment and patient preference (ACCORD Study Group, 2010 [A], Cooper-DeHoff, 2010 [M]). Treatment of Hypertension in Patients with Coronary Artery Disease: American Heart Association, American College of Cardiology, and American Society of Hypertension Scientific Statement March 31 2015 Table # 3 Summary of BP Goals (Table 3 page 1376) Please note that specifically for CAD the evidence is graded I/A. **Table 3. Summary of BP Goals** BP Target / Condition / Class/Level Evidence < 150/90 — Age > 80 — IIa/B < 140/90 — CAD — I/A ACS — IIa/C HF — IIa/B <130/80 — CAD — IIb/C Post-myocardial infarction, stroke or TIA, CAD, PAD or AAA AAA indicates abdominal aortic aneurysm; ACS acute coronary syndrome; BP blood pressure; CAD coronary artery disease; HF heart failure; PAD peripheral artery disease; and TIA transient ischemic attack Additional Recommendations for Blood Pressure Targets: (Table 3.3 pg. 1386) 1. The <140/90-mm Hg BP target is reasonable for the secondary prevention of cardiovascular events in patients with hypertension and CAD (Class IIa; Level of Evidence B). 2. A lower target BP (<130/80 mm Hg) may be appropriate in some individuals with CAD, previous MI, stroke or transient ischemic attack, or CAD risk equivalents (carotid artery disease, PAD, abdominal aortic aneurysm) (Class IIb; Level of Evidence B) **Cochrane Review 2018** **Background**

	Hypertension is a prominent preventable cause of premature morbidity and mortality. People with hypertension and established cardiovascular disease are at particularly high risk, so reducing blood pressure to below standard targets may be beneficial. This strategy could reduce cardiovascular mortality and morbidity but could also increase adverse events. The optimal blood pressure target in people with hypertension and established cardiovascular disease remains unknown. **Main results** We included six RCTs that involved a total of 9484 participants. Mean follow-up was 3.7 years (range 1.0 to 4.7 years). All RCTs provided individual participant data. We found no change in total mortality (risk ratio (RR) 1.06, 95% confidence interval (CI) 0.91 to 1.23) or cardiovascular mortality (RR 1.03, 95% CI 0.82 to 1.29; moderate-quality evidence). Similarly, we found no differences in serious adverse events (RR 1.01, 95% CI 0.94 to 1.08; low-quality evidence) or total cardiovascular events (including myocardial infarction, stroke, sudden death, hospitalization, or death from congestive heart failure) (RR 0.89, 95% CI 0.80 to 1.00; low-quality evidence). Studies reported more participant withdrawals due to adverse effects in the lower target arm (RR 8.16, 95% CI 2.06 to 32.28; very low-quality evidence). Blood pressures were lower in the lower target group by 8.9/4.5 mmHg. More drugs were needed in the lower target group, but blood pressure targets were achieved more frequently in the standard target group. **Authors' conclusions** We found no evidence of a difference in total mortality, serious adverse events, or total cardiovascular events between people with hypertension and cardiovascular disease treated to a lower or to a standard blood pressure target. This suggests that no net health benefit is derived from a lower systolic blood pressure target. We found very limited evidence on adverse events, which led to high uncertainty. At present, evidence is insufficient to justify lower blood pressure targets (K 135/85 mmHg) in people with hypertension and established cardiovascular disease. More trials are needed to examine this topic.
Grade assigned to the **evidence** associated with the recommendation with the definition of the grade	Grade II, A Class A Quality + RCT Class I, Level of Evidence A Class I is Benefit >>> Risk and Procedure or treatment SHOULD be performed/ administered. Level A is multiple populations and multiple RCTs Cochrane Database of Systematic Reviews 2018
Provide all other grades and definitions from the evidence grading system	ICSI has converted all guidelines to GRADE. GRADE A is random control trials support See above

Grade assigned to the **recommendation** with definition of the grade	2010; see above See above
Provide all other grades and definitions from the recommendation grading system	2010; see above See above
Body of evidence: • Quantity – how many studies? • Quality – what type of studies?	ICSI Clinical Practice Guideline (evidence review by experts) Joint Scientific Statement (evidence review by experts) Cochrane review - six RCTs that involved a total of 9484 participants. Mean follow-up was 3.7 years (range 1.0 to 4.7 years). All RCTs provided individual participant data.
Estimates of benefit and consistency across studies	Despite existing controversy over discrete blood pressure targets for measurement, there is agreement that a lower blood pressure is better for patients, but a more aggressive target for all patients may put some patients at risk for harm.
What harms were identified?	Risks outweigh benefits, no harms identified
Identify any new studies conducted since the SR. Do the new studies change the conclusions from the SR?	See Cochrane Review. Outlines controversy surrounding selection of blood pressure targets and supports the measure development workgroup's decision

ACC/ AHA Guidelines for the Diagnosis and Management of Hypertension-

Review by MNCM Measure Development Workgroup

Background:

In November of 2017, the American Academy of Cardiology and American Heart Association released new guidelines for the prevention, diagnosis and management of hypertension in adults.[1] These guidelines redefined the diagnosis of hypertension moving from ≥ 140/ 90 to a new definition of stage 1 hypertension (130-139/ 80-89). With new definition, it is estimated that 46% of Americans will now be considered to have hypertension, up from 32% with a definition of ≥ 140/90. The release of the guidelines is not without controversy, and while most agree that a lower blood pressure is better, it is within the context of a patient's individualized goal. Less than 130/80 may not be an appropriate target for every patient. The American College of Physicians and the American Academy of Family Practice has declined endorsement of the new guidelines. They cite concerns with the methodology used in making recommendations and perceived conflict of interest. They are recommending reliance on 2014 JNC8 and ACP/AAFP guidelines for older adults.

Patients with diabetes and cardiovascular disease represent two very high-risk subgroups; in an effort to reduce their modifiable risk factors, the blood pressure component target of the Optimal

[1] American College of Cardiology/ American Heart Association Guidelines for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults November 13, 2017

Diabetes Care (ODC) and Optimal Vascular Care (OVC) measures has reflected a goal that is below the hypertension definition cut-point.

In similar measure development activities, the National Committee for Quality Assurance (NCQA) convened three expert panels (diabetes, cardiovascular and geriatric) for their evaluation of blood pressure targets for the HEDIS Controlling High Blood Pressure measure and concluded that for patients with hypertension ages 18 - 85 the blood pressure target is < 140/90.

An MNCM convened measure development multi-stakeholder group met in April of 2018 to evaluate and discuss recent changes in guidelines and evidence surrounding blood pressure targets for patients with diabetes and vascular disease. Based on this evaluation, determine the best BP component targets for the composite measures.

Considerable time was devoted to the discussion of the evidence supporting guidelines, applicability of research studies into clinical practice, risk-harm benefit and need for individualized patient goals. After thoughtful and thorough discussion of current guidelines, evidence, and real-world practice implications, the work group gained consensus on the best BP targets for patients with diabetes and vascular disease.

Key considerations included:

- **Evaluation of SPRINT (Systolic Blood Pressure Intervention Trial) demonstrates that for the primary outcome of mortality, there is only a 0.5% difference between the intensive treatment group and the standard treatment group. Generalization of the SPRINT results to every day practice raised the issues of:**
    1. **SPRINT study design called for the withdrawal of treatment in asymptomatic patients in the conservative treatment arm, which does not match clinical practice**
    2. **Average systolic BP achieved was 121**
    3. **Best practice methods to obtain BP in a study (auto-BP machine, quiet setting, and resting 10 min) do not match current clinic practice.**

The SPRINT study excluded patients with diabetes, so its results are not transferable when there is direct evidence from the ACCORD study that is applicable. ACCORD (Action to Control Cardiovascular Disease in Diabetes) showed very little benefit for BP targets < 140/90.

- **Guidelines do not address treatment risks (hypotension, kidney function). The main concern of the workgroup was that in setting a lower target for all patients to strive for, knowing that providers will want to meet that target and may be accountable for hitting that target, may put some patients at risk for serious and costly side effects of intensive treatment. The workgroup would like to encourage individualized targets, knowing that a lower blood pressure is better for the patient, but only if it can be achieved safely.**

- **There is not consensus at this time among the guideline writing groups about the definition of hypertension or appropriate targets for high risk populations like patients with diabetes or ischemic vascular disease, therefore not a clear direction for measurement to align with guidelines.**

Measure Development Workgroup Recommendation:

- **Blood Pressure Targets Remain at < 140/90 for ODC and OVC (unchanged)**
    - Encourage individualized goals for those patients who may benefit from BP target < 130/80

MNCM Diabetes and Vascular Measure Development Work Group Members

Name	Member Type	Organization
Beth Averbeck, MD	Clinical Provider; Internal Medicine; Chair	HealthPartners
Joseph Bianco, MD	Clinical Provider; Family Medicine and MARC	Essentia Health- Ely
Andrew Greenland, MD	Clinical Provider; Internal Medicine	Mayo Clinic
Christopher Fallert, MD	Clinical Provider; Family Medicine	University of Minnesota
Christian Anderson, MD	Clinical Provider; Family Medicine	Entira Family Clinics
Steven Bradley, MD MPH	Clinical Provider; Cardiology	Minneapolis Heart
David Homans, MD	Clinical Provider; Cardiology	Park Nicollet
Jesse Wheeler, MD	Clinical Provider; Nephrology and MARC	Park Nicollet
Nicole Paterson, PharmD	Clinical Provider; Pharmacist	Fairview Health Services
Karen Margolis, MD MPH	Data Analyst	HealthPartners
Cindy Ferrara, RN	Quality Improvement	Essentia Health- Duluth
Patrick Schultz, ACNS-BC	Clinic Administrator	Sanford
James Peacock, PhD MPH	State Agency	MN Dept. of Health
Cynthia Toher, MD	Health Plan/ Cardiologist	Blue Cross/Blue Shield MN
David Klocke, MD	Health Plan/Hospital Medicine and EM	Blue Cross/Blue Shield MN
Christine Norton	Consumer and MARC	Retired
Deb Krause	Employer	MN Health Action Group

Institute for Clinical Systems Improvement Hypertension Workgroup Commentary 2018

Excerpts-

Background- Reception to the new ACC/AHA guideline has been mixed. Differing interpretations of the same body of evidence has led to conflicting recommendations. The American College of Physicians (ACP) and American Academy of Family Physicians (AAFP) did not endorse the new ACC/AHA guideline. Notably, ACP and AAFP published a guideline in January 2017 recommending a goal of less than 150/90 mm Hg for adults over age 60. The American Diabetes Association recommends treatment to a BP < 140/90 mm Hg for most patients with diabetes and consideration of a target < 130/80 for those at high cardiovascular risk if it can be achieved without undue burden. As the controversy continues, providers are left wondering how to advise patients.

Challenges Ahead- Measurement To understand blood pressure on a population level, it may be most useful to look at the distribution curve of blood pressures across the population. This provides a more detailed picture of the problem, which then helps direct intervention. The work

group agrees with a blood pressure goal of less than 130/80 mm Hg for the general population, to be adjusted as needed for the individual. However, the group has significant concerns with using less than 130/80 mm Hg as an accountability target because it might result in pharmacologic therapy for some patients who are at low cardiovascular risk and should only be treated by lifestyle modifications. The group agrees that because of the individualized nature of hypertension management, flexibility with measurement is critical.

https://www.icsi.org/wp-content/uploads/2019/01/ICSI-HTN-Work-Group-2018-CommentaryUpdated071718.pdf

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1a.4 OTHER SOURCE OF EVIDENCE

If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, please describe the evidence on which you are basing the performance measure.

1a.4.1 Briefly SYNTHESIZE the evidence that supports the measure. A list of references without a summary is not acceptable.

1a.4.2 What process was used to identify the evidence?

1a.4.3. Provide the citation(s) for the evidence.

Component # 2 Cholesterol Statin Use

1a.1.This is a measure of: (*should be consistent with type of measure entered in De.1*)

Outcome

☐ Outcome: Click here to name the health outcome

☐Patient-reported outcome (PRO): Click here to name the PRO

PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors. (A PRO-based performance measure is not a survey instrument. Data may be collected using a survey instrument to construct a PRO measure.)

☐ Intermediate clinical outcome (*e.g., lab value*):

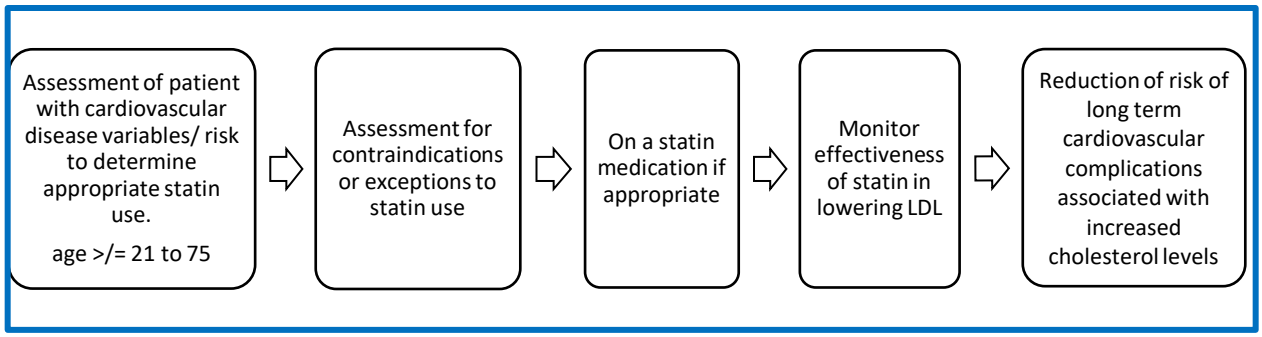
☒ Process:

☒ Appropriate use measure: Appropriate statin use for patients with ischemic vascular disease

☐ Structure: Click here to name the structure

☒ Composite: Optimal Vascular Care

1a.2 LOGIC MODEL Diagram or briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.



1a.3 Value and Meaningfulness: **IF** this measure is derived from patient report, provide evidence that the target population values the measured ***outcome, process, or structure*** and finds it meaningful. (Describe how and from whom their input was obtained.)

****RESPOND TO ONLY ONE SECTION BELOW -EITHER 1a.2, 1a.3 or 1a.4) ****

1a.2 FOR OUTCOME MEASURES including PATIENT REPORTED OUTCOMES - Provide empirical data demonstrating the relationship between the outcome (or PRO) to at least one healthcare structure, process, intervention, or service.

1a.3. SYSTEMATIC REVIEW(SR) OF THE EVIDENCE (for INTERMEDIATE OUTCOME, PROCESS, OR STRUCTURE PERFORMANCE MEASURES, INCLUDING THOSE THAT ARE INSTRUMENT-BASED) If the evidence is not based on a systematic review go to section 1a.4) If you wish to include more than one systematic review, add additional tables.

What is the source of the systematic review of the body of evidence that supports the performance measure? A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data. (IOM)

☒ Clinical Practice Guideline recommendation (with evidence review)

☐ US Preventive Services Task Force Recommendation

☐ Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*)

☐ Other

Source of Systematic Review: • **Title**	**Institute for Clinical Systems Improvement (ICSI)**

• **Author** • **Date** • **Citation, including page number** • **URL**	**Lipid Management in Adults 2007 Woolley, T., Kopecky, S., Kottke, T** **URL is no longer active. In 2013 ICSI endorsed ACC/AHA 2013 guidelines.** **ICSI Lipid Management in Adults (updated Nov 2013/ completed prior to ACC/AHA release)** **2013 ACC/AHA Guideline: Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults** **2.2. Four Major Statin Benefit Groups (pg 13- 15)**
Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the SR.	ICSI: Initiate Statin Treatment Recommendations: Clinicians should initiate statin therapy regardless of LDL, in patients with established ASCVD (Strong Recommendation, High Quality Evidence) (Cannon, 2004; Heart Protection Study Collaborative Group, 2002; Shepard, 2002; La Rosa, 1999; LIPID Study Group, 1998; Goldberg, 1998; Scandinavian Simvastatin Survival Study Group, 1994). ACC/AHA: Expert Panel found extensive and consistent evidence supporting the use of statins for the prevention of ASCVD in many higher risk primary and all secondary prevention individuals without NYHA class II-IV heart failure and who were not receiving hemodialysis. In the RCTs reviewed, initiation of moderate intensity therapy (lowering LDL–C by approximately 30% to <50%), or high-intensity statin therapy (lowering LDL–C by approximately •50%), is a critical factor in reducing ASCVD events. Moreover, statin therapy reduces ASCVD events across the spectrum of baseline LDL–C levels >70 mg/dL. In addition, the relative reduction in ASCVD risk is consistent for primary and secondary prevention and for various patient subgroups. Of note, the absolute reduction in ASCVD events is proportional to baseline absolute ASCVD risk. Therefore, statin therapy is recommended for individuals at increased ASCVD risk who are most likely to experience a net benefit in terms of the potential for ASCVD risk reduction and the potential for adverse effects. On the basis of this large and consistent body of evidence, 4 major statin benefit groups were identified for whom the ASCVD risk reduction clearly outweighs the risk of adverse events. Individuals 1) with clinical ASCVD, 2) primary elevations of LDL–C >190 mg/dL, 3) diabetes aged 40 to 75 years with LDL– C 70 to189 mg/dL and without clinical ASCVD, or 4) without clinical ASCVD or diabetes with LDL–C 70 to189 mg/dL and estimated 10-year ASCVD risk >7.5%. Clinical ASCVD is defined by

	the inclusion criteria for the secondary prevention statin RCTs (acute coronary syndromes, or a history of MI, stable or unstable angina, coronary or other arterial revascularization, stroke, TIA, or peripheral arterial disease presumed to be of atherosclerotic origin).
Grade assigned to the **evidence** associated with the recommendation with the definition of the grade	Evidence Grade IA Class I = Benefit >>> outweighs risk. Procedure/ Treatment SHOULD be performed/ administered Level A = Multiple populations evaluated. Data derived from multiple randomized clinical trials or meta-analyses. Recommendation that procedure or treatment is useful/ effective. Sufficient evidence from multiple randomized control trials or meta-analysis.
Provide all other grades and definitions from the evidence grading system	
Grade assigned to the **recommendation** with definition of the grade	Evidence Grade Class I Level A
Provide all other grades and definitions from the recommendation grading system	
Body of evidence: • Quantity – how many studies? • Quality – what type of studies?	Clinical Practice Guideline (evidence review by experts) 60 randomized control trials, 1 systematic review and 1 meta-analysis. The quality of evidence across studies related to the secondary prevention of cardiovascular events was rated as strong. [Level A = Multiple populations evaluated. Data derived from multiple randomized clinical trials or meta-analyses. Recommendation that procedure or treatment is useful/ effective. Sufficient evidence from multiple randomized control trials or meta-analysis.]
Estimates of benefit and consistency across studies	The estimate of benefit outweighs significantly with a Class I Level A grade recommendation.
What harms were identified?	
Identify any new studies conducted since the SR. Do the new studies change the conclusions from the SR?	

1a.4 OTHER SOURCE OF EVIDENCE

If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, please describe the evidence on which you are basing the performance measure.

1a.4.1 Briefly SYNTHESIZE the evidence that supports the measure. A list of references without a summary is not acceptable.

1a.4.2 What process was used to identify the evidence?

1a.4.3. Provide the citation(s) for the evidence.

Component # 3 Tobacco Free

1a.1.This is a measure of: (*should be consistent with type of measure entered in De.1*)

Outcome

☒ Outcome: Click here to name the health outcome

☐ Patient-reported outcome (PRO): Click here to name the PRO

PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors. (*A PRO-based performance measure is not a survey instrument. Data may be collected using a survey instrument to construct a PRO measure.)*

☐ Intermediate clinical outcome (*e.g., lab value*): Click here to name the intermediate outcome

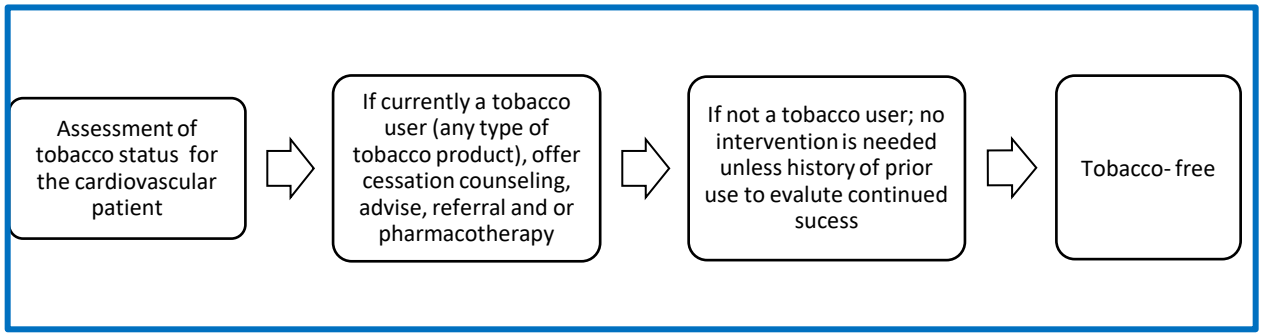
☐ Process: Click here to name what is being measured

☐ Appropriate use measure: Click here to name what is being measured

☐ Structure: Click here to name the structure

☒ Composite: Optimal Vascular Care

1a.2 LOGIC MODEL Diagram or briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.



1a.3 Value and Meaningfulness: IF this measure is derived from patient report, provide evidence that the target population values the measured ***outcome, process, or structure*** and finds it meaningful. (Describe how and from whom their input was obtained.)

****RESPOND TO ONLY ONE SECTION BELOW -EITHER 1a.2, 1a.3 or 1a.4) ****

1a.2 FOR OUTCOME MEASURES including PATIENT REPORTED OUTCOMES - Provide empirical data demonstrating the relationship between the outcome (or PRO) to at least one healthcare structure, process, intervention, or service.

ICSI Stable Coronary Artery Disease April 2011

Address Modifiable Risk Factors and Comorbid Conditions:

Comorbid conditions that could affect myocardial ischemia may include hypertension, anemia, thyroid disease, hypoxemia and others. Modifiable risk factors for coronary heart disease need to be evaluated and may include smoking, inadequate physical activity, stress, hyperlipidemia, obesity, hypertension and diabetes mellitus. Intervention involving any risk factor pertinent to the patient is encouraged and may include education, goal setting, and follow-up as necessary (Rutherford, 1992 [R]; Shub, 1990 [R]).

According to the United States Preventive Services Task Force (USPSTF) cigarette smoking and exposure to smoke result in more than 480 000 premature deaths in the United States every year, along with substantial illness. Despite considerable progress in tobacco control over the past 50 years, in 2013, an estimated 17.8% of U.S. adults (3) and 15.9% of pregnant women aged 15 to 44 years were current cigarette smokers. The Centers for Disease Control indicates that smoking is a major cause of cardiovascular disease and that tobacco use contributes to heart disease and stroke by raising triglycerides, lowering (good) HDL cholesterol, increases clotting factors, damages cells that line blood vessels, increases the buildup of plague, and causes thickening and narrowing of blood vessels.

http://www.cdc.gov/tobacco/basic_information/health_effects/heart_disease/

Receipt of evidence-based brief cessation interventions by health professionals and use of cessation assisted treatments among current adult cigarette-only smokers: National Adult Tobacco Survey, 2009–2010 Kruger, J., O'Halloran, A. et. al. BMC Public Health 2016 PMCID: PMC4751655 PMID: 26868930

Results: In this large sample (N = 10,801) of current cigarette-only smokers who visited a health professional in the past 12 months, 6.3 % reported use of both counseling and medication for smoking cessation within the past year. Other assisted cessation treatments used to quit were: medication (19.6 %); class or program (3.8 %); one-on-one counseling (3.7 %); and telephone quitline (2.6 %). Current cigarette-only smokers who reported receiving all 5 A's during a recent clinic visit were more likely to use counseling (odds ratio [OR]: 11.2, 95 % confidence interval [CI]: 7.1–17.5), medication (OR: 6.2, 95 % CI: 4.3–9.0), or a combination of counseling and medication (OR: 14.6, 95 % CI: 9.3–23.0), compared to smokers who received one or none of the 5 A's components.

Conclusions: Receipt of the '5 A's' intervention was associated with a significant increase in patients' use of recommended counseling and medication for cessation. It is important for health professionals to deliver all 5 A's when conducting brief cessation interventions with patients who smoke.

Note: the 5 A's are → Ask about tobacco use, Advise tobacco users to quit, Assess willingness to make a quit attempt, Assist tobacco users in making a quit attempt, and Arrange for follow-up.

1a.3. SYSTEMATIC REVIEW(SR) OF THE EVIDENCE (for INTERMEDIATE OUTCOME, PROCESS, OR STRUCTURE PERFORMANCE MEASURES, INCLUDING THOSE THAT ARE INSTRUMENT-BASED) If the evidence is not based on a systematic review go to section 1a.4) If you wish to include more than one systematic review, add additional tables.

What is the source of the systematic review of the body of evidence that supports the performance measure? A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data. (IOM)

☐ Clinical Practice Guideline recommendation (with evidence review)

☐ US Preventive Services Task Force Recommendation

☐ Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*)

☐ Other

Source of Systematic Review: • **Title** • **Author** • **Date** • **Citation, including page number** • **URL**	**Not applicable**
Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the SR.	
Grade assigned to the **evidence** associated with the recommendation with the definition of the grade	
Provide all other grades and definitions from the evidence grading system	
Grade assigned to the **recommendation** with definition of the grade	
Provide all other grades and definitions from the recommendation grading system	
Body of evidence: • Quantity – how many studies? • Quality – what type of studies?	
Estimates of benefit and consistency across studies	
What harms were identified?	
Identify any new studies conducted since the SR. Do the new studies change the conclusions from the SR?	

1a.4 OTHER SOURCE OF EVIDENCE

If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, please describe the evidence on which you are basing the performance measure.

1a.4.1 Briefly SYNTHESIZE the evidence that supports the measure. A list of references without a summary is not acceptable.

1a.4.2 What process was used to identify the evidence?

1a.4.3. Provide the citation(s) for the evidence.

Component # 4 Daily Aspirin or Antiplatelet Medication

1a.1.This is a measure of: (*should be consistent with type of measure entered in De.1*)

Outcome

☐ Outcome: Click here to name the health outcome

☐Patient-reported outcome (PRO): Click here to name the PRO

PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors. (*A PRO-based performance measure is not a survey instrument. Data may be collected using a survey instrument to construct a PRO measure.)*

☐ Intermediate clinical outcome (*e.g., lab value*): Click here to name the intermediate outcome

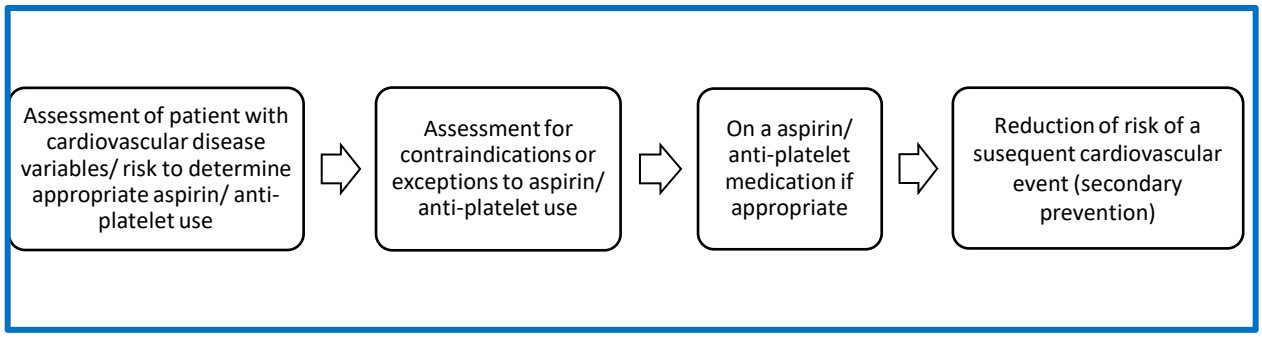
☒ Process: Click here to name what is being measured

☒ Appropriate use measure: Appropriate daily aspirin or antiplatelet use for patients with ischemic vascular disease

☐ Structure: Click here to name the structure

☒ Composite: Optimal Vascular Care

1a.2 LOGIC MODEL Diagram or briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.



1a.3 Value and Meaningfulness: **IF** this measure is derived from patient report, provide evidence that the target population values the measured ***outcome, process, or structure*** and finds it meaningful. (Describe how and from whom their input was obtained.)

****RESPOND TO ONLY ONE SECTION BELOW -EITHER 1a.2, 1a.3 or 1a.4) ****

1a.2 FOR OUTCOME MEASURES including PATIENT REPORTED OUTCOMES - Provide empirical data demonstrating the relationship between the outcome (or PRO) to at least one healthcare structure, process, intervention, or service.

1a.3. SYSTEMATIC REVIEW(SR) OF THE EVIDENCE (for INTERMEDIATE OUTCOME, PROCESS, OR STRUCTURE PERFORMANCE MEASURES, INCLUDING THOSE THAT ARE INSTRUMENT-BASED) If the evidence is not based on a systematic review go to section 1a.4) If you wish to include more than one systematic review, add additional tables.

What is the source of the systematic review of the body of evidence that supports the performance measure? A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data. (IOM)

☒ Clinical Practice Guideline recommendation (with evidence review)

☐ US Preventive Services Task Force Recommendation

☐ Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*)

☐ Other

Source of Systematic Review: • **Title** • **Author** • **Date** • **Citation, including page number** • **URL**	**ICSI Stable Coronary Artery Disease** **Lehman, G., Nguyen, J.H. et. al. April 2009** **Algorithm annotation 21.a pg. 14** **URL no longer active** **AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2011 Update Smith, N.C., Bonow, R.O., et. al.** **https://www.ahajournals.org/doi/pdf/10.1161/CIR.0b013e318235eb4d** **American College of Cardiology Clinician Guide to the ABCs of Primary and Secondary Prevention of Atherosclerotic Cardiovascular Disease 2018 https://www.acc.org/latest-in-cardiology/articles/2018/03/30/18/34/clinician-guide-to-the-abcs** **American College of Cardiology Dual Anti Platelet Therapy (DAPT) Guidelines 2016**
Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the SR.	The use of one aspirin tablet daily (81-162 mg) is strongly recommended unless there are medical contraindications (Antiplatelet Trialists´ Collaboration, 1994 [A]; CAPRI, 1996 [A]; Fuster, 1993 [R]; Juul- Möller, 1992 [A]; Kurth, 2003 [A]; Ridker, 1991 [A]).The Antithrombotic Trialists´ Collaboration is a meta-analysis that analyzed 287 studies involving 135,000 patients for different aspects of antiplatelet therapy. AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2011 Update Antiplatelet agents/anticoagulants (pg. 3 – 4; recommendations 1 and 5 apply for patients with ischemic vascular disease) Class I Recommendations: 1. Aspirin 75–162 mg daily is recommended in all patients with coronary artery disease unless contraindicated. (Level of Evidence: A) • Clopidogrel 75 mg daily is recommended as an alternative for patients who are intolerant of or allergic to aspirin. (Level of Evidence: B) 5. For patients with symptomatic atherosclerotic peripheral artery disease of the lower extremity, antiplatelet therapy with aspirin (75–325 mg daily) or clopidogrel (75 mg daily) should be started and continued. (Level of Evidence: A)

	American College of Cardiology Clinician Guide to the ABCs of Primary and Secondary Prevention of Atherosclerotic Cardiovascular Disease A: Antiplatelet Therapy SECONDARY PREVENTION Aspirin 81-162 mg/day indefinitely [Class I]. Clopidogrel, prasugrel, or ticagrelor (i.e., P2Y12 inhibitor) in addition to aspirin after PCI [Class I]. If bare-metal stent, P2Y12 inhibitors should be taken for ≥1 month [Class I]. If drug-eluting stent, P2Y12 inhibitors for ≥1 year [Class I]. If on dual antiplatelet therapy (DAPT), use aspirin 81 mg/day [Class I]. If no PCI was performed after an ACS event, either clopidogrel or ticagrelor should be used. Do not use prasugrel if history of stroke or TIA [Class III]. Caution in those over 70 years of age. Aspirin 81 to 325 mg/day or clopidogrel for all patients following a non-cardioembolic ischemic stroke [Class I]. American College of Cardiology Dual Anti Platelet Therapy (DAPT) Guidelines In patients treated with DAPT, a daily aspirin dose of 81 mg (range 75 mg to 100 mg) is recommended [COR I LOE B-NR]
Grade assigned to the **evidence** associated with the recommendation with the definition of the grade	Evidence Grade Class I Level A and Level B Class I Class of Recommendation (COR) I = Strong (should be performed, is indicated, treatment A over treatment B) Level of Evidence (LOE) B-NR = moderate quality evidence from 1 or more well designed, nonrandomized, observational or registry studies. Meta-analyses.
Provide all other grades and definitions from the evidence grading system	na
Grade assigned to the **recommendation** with definition of the grade	Class I = Benefit >>> outweighs risk. Procedure/ Treatment SHOULD be performed/ administered Level A = Multiple populations evaluated. Data derived from multiple randomized clinical trials or meta-analyses. Recommendation that procedure or treatment is useful/ effective. Sufficient evidence from multiple randomized control trials or meta-analysis. Level B = Limited populations evaluated. Data derived from a single randomized trial or non-randomized studies

	Class of Recommendation (COR) I = Strong (should be performed, is indicated, treatment A over treatment B)
Provide all other grades and definitions from the recommendation grading system	
Body of evidence: • Quantity – how many studies? • Quality – what type of studies?	Clinical Practice Guideline (evidence review by experts) Clinical Practice Guideline (evidence review by experts)
Estimates of benefit and consistency across studies	Benefits of aspirin or antiplatelet therapy significantly outweigh potential risks of gastrointestinal bleeding.
What harms were identified?	
Identify any new studies conducted since the SR. Do the new studies change the conclusions from the SR?	

_____

1a.4 OTHER SOURCE OF EVIDENCE

If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, please describe the evidence on which you are basing the performance measure.

1a.4.1 Briefly SYNTHESIZE the evidence that supports the measure. A list of references without a summary is not acceptable.

1a.4.2 What process was used to identify the evidence?

1a.4.3. Provide the citation(s) for the evidence.

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure *(e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)*

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

The intermediate physiological and biochemical outcomes included in this composite measure along with the appropriate use of statins and daily aspirin or antiplatelets are modifiable lifestyle risk factors that can

ultimately decrease the incidence of long term catastrophic events and chronic illness associated with cardiovascular disease.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

In 2019 (2018 dates of service), 678 clinics submitted data on over 185,000 patients with ischemic vascular disease. 61.1% of the patients met all four component targets in the composite measure and were considered optimally managed. Of the clinics that were reportable (patient n >= 30), there was a wide range of variability with the lowest scoring clinic at 16.1% and the highest scoring clinic at 83.1%.

The trends for this measure are as follows:

Report Year	Rate	Patients (Den)	Numerator	Eligible	% submit/eligible
2007	38.9%	4,662	1,595	11,740	39.7%
2008	32.6%	36,126	11,997	54,708	66.0%
2009	33.8%	46,779	16,529	80,907	57.8%
2010	33.8%	63,241	21,589	95,791	66.0%
2011*	39.7%	66,910	27,083	96,270	69.5%
2012	49.4%	78,886	39,242	95,482	82.6%
2013	48.5%	87,345	42,689	93,761	93.1%
2014	50.0%	98,803	49,408	99,550	99.2%
2015**	69.3%	102,654	71,196	103,006	99.7%
2016***	66.1%	104,395	69,026	104,494	99.9%
2017^	61.6%	186,913	115,190	186,913	100%
2018	61.5%	177,898	109,434	177,822	99.9%
2019	61.1%	185,840	113,536	185,840	100%

* Blood pressure component target change based on evidence/ guidelines from < 130/80 to < 140/90

** Cholesterol management component suppressed during re-design

*** Cholesterol management component change from LDL < 100 to appropriate statin use

^ Established patient criteria replaces visit counting

Performance Variation*

Percentiles	
10th	34.2%
25th	44.4%
50th	54.3%
75th	65.5%
Range:	25.5% - 75.5%
Mean:	51.6%

*per MNCM policy for clinic or medical group pubic reporting; number of patients or observations needs to be greater than or equal to 30

Individual rates of the components are as follows:

Blood Pressure <140/90 = 83.7%

Statin Use = 91.6%

Daily Aspirin Use = 92.5%

Tobacco Non-user = 82.4%

Aspirin component rates are high, however the providers in this data set (Minnesota) have been working on this measure for many years. According to an article recently published in US Pharm 2019;44(2):36 the CDC's Behavioral Risk Factor Surveillance System 2013 reported that only 70.8% of adults with atherosclerotic cardiovascular disease (ASCVD) use aspirin regularly. Similarly, MN providers have a higher rate of statin use than the reported average rate in CMS benchmarking data for e-CQM (82%)

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.

Trend over time by Component and Report Year

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BP <140/90	na	na	na	84.0%	84.1%	84.9%	85.2%	85.0%	84.1%	83.5%	83.7%
Aspirin Use	92.5%	91.9%	94.2%	94.7%	96.5%	96.6%	96.6%	96.7%	93.6%	93.3%	92.5%
Tobacco Free	82.4%	81.2%	82.7%	82.6%	82.9%	84.1%	83.5%	83.0%	82.5%	82.4%	82.4%
Statin Use	na	na	na	na	na	na	na	94.7%	90.9%	91.6%	91.6%

Consumer facing Website MN HealthScores

Displays the top xx best performers (2019 Report/ 2018 Dates of Service) in addition to rates for all clinics in MN

Rate % Clinic Location

83% Ridgeview Chaska Clinic Chaska, MN

80% Entira Family Clinics- Banning Clinic White Bear Lake, MN

79% Ridgeview Delano Clinic Delano, MN

78% M Health Fairview Clinic Lakeville Lakeville, MN

77% HealthPartners- Arden Hills Arden Hills, MN

76% Entira Family Clinics- Como/Roseville St. Paul, MN

76% M Health Fairview Clinic Farmington Farmington, MN

75% HealthEast Midway Clinic St. Paul, MN

75% M Health Fairview Clinic Eagan Eagan, MN

75% HealthPartners- Brooklyn Center Brooklyn Center, MN

74% M Health Fairview Clinic Zimmerman Zimmerman, MN

73% M Health Fairview Clinic Lake Street Minneapolis, MN

71% HealthPartners- Ctr for Internatl Hlth St. Paul, MN

Publicly reported data with clinic level rates is available on the MN HealthScores website at

www.mnhealthscores.org/search/site//bundle/clinic/topics/92/#/results?topics=M92&viewmode=detail&page=2&non_rpt_hidden=y&columnname=M92&columntosort=M92&sortorder=desc

In 2019 (2018 dates of service), 98 medical groups representing 678 physician clinics and 185,840 patients with IVD in Minnesota and neighboring communities submitted data for this measure. The data submission process requires individual patient data for each component of the "all or none" composite measure (e.g., most recent

blood pressure values in the measurement period). This information is accurately captured as evidenced by post submission validation audits against the patient's medical record. Data has been collected on a statewide basis in MN for over 10 years demonstrating that results can be reliably reproduced.

Periodically, MNCM surveys the medical groups about the value of this measure in improving health outcomes for their patients. In 2018, 79% of medical groups rated this measure as "High Value" or "Moderate Value" (87/110).

Additionally, on an annual basis, the MNCM Measure Review Committee (MRC) reviews each measure for continued suitability for public reporting and rates the measure against several NQF criteria including importance to measure with continued opportunity for improvement and feasibility. In 2019 the MRC rated the impact of this measure as an average of 8.9 on a 10 point scale where 10 is the most impactful.

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

na

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

Optimal Vascular Care Rates by Race as Compared to Statewide Average in 2029

Race	I 2014**	I 2016*	I 2019	? average
White	I 50.8%	I 67.2%	I 62.7%	?
Black/ African Amer		I 35.5%	I 47.6%	I 44.8% ?
Asian	I 54.4%	I 70.6%	I 67.7%	?
Multi-Racial		I 42.6%	I 53.4%	I 49.7% ?
Amer Ind/Alask Native		I 34.6%	I 51.8%	I 45.1% ?
Nat Hawaii/Pacific Isl		I 50.0%	I 71.4%	I 55.2% ?
Hispanic		I 48%	I 66%	I 57.5% ?
Non-Hispanic		I 50%	I 67%	I 62.0% ?

** Cholesterol management component was LDL < 100

* Cholesterol management component redesigned to appropriate statin use

Measure rates by race and ethnicity demonstrate disparity and continued opportunity for improvement and reducing the gap in care and outcomes.

Heart disease is the leading cause of death for people of most racial/ethnic groups in the United States, including African Americans, Hispanics, and whites. For Asian Americans or Pacific Islanders and American Indians or Alaska Natives, heart disease is second only to cancer. [Heron M. Deaths: Leading causes for 2008[PDF-2.7M]. National vital statistics reports. 2012;60(6)]

Cardiovascular disease risk factors include both modifiable risk factors (hypocholesteremia, hypertension, diabetes and pre-diabetes, overweight and obesity, tobacco use, lack of physical activity, unhealthy diet and stress) and risk factors that cannot be changed (age, gender and family history of CHD). [National Heart, Lung, Blood Institute www.nhlbi.nih.gov/health/health-topics/topics/hd]

Blacks are nearly twice as likely to have a first stroke and much more likely to die from one than whites. [Heart Disease and Stroke Statistics – 2009 Update: A Report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Circulation 2008]

American Indians/Alaska Natives die from heart disease much earlier than expected – 36% are under 65 compared with only 17% for the U.S. population overall. [Centers for Disease Control and Prevention. Disparities in premature deaths from heart disease, 2001. MMWR 53(6):121-125]

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

na

1c. Composite Quality Construct and Rationale

1c.1. A composite performance measure is a combination of two or more component measures, each of which individually reflects quality of care, into a single performance measure with a single score.

For purposes of NQF measure submission, evaluation, and endorsement, the following will be considered composites:

- Measures with two or more individual performance measure scores combined into one score for an accountable entity.
- Measures with two or more individual component measures assessed separately for each patient and then aggregated into one score for an accountable entity:
    - all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient);

1c.1. Please identify the composite measure construction: all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient)

1c.2. Describe the quality construct, including:

- the overall area of quality
- included component measures and
- the relationship of the component measures to the overall composite and to each other.

This composite measure is a patient level all-or-none composite in which the desired goal is for the patient is to achieve multiple intermediate physiological clinical outcome and medication use targets to best reduce their overall risk of developing further ischemic vascular complications (short and long term) or an additional cardiovascular event. Reducing modifiable risks was the reason why this measure was developed. The components of this measure include blood pressure control, appropriate use of statins, appropriate use of daily aspirin or anti-platelet medication and being tobacco-free.

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

Numerator is calculated at the patient level and numerator compliance is defined as the patient achieving all four components of the measure. The components are weighted equally.

1c.3. Describe the rationale for constructing a composite measure, including how the composite provides a distinctive or additive value over the component measures individually.

Achieving the intermediate physiological outcome targets related to blood pressure in addition to being tobacco free and use of daily aspirin and statins where appropriate are the cardiovascular patient's best

mechanisms of avoiding or postponing long term complications associated with this chronic condition which affects millions of Americans. Measuring providers separately on individual targets is not as patient centric as a measure that seeks to reduce multiple risk factors for each patient. Patients with ischemic vascular disease are more likely to reduce their overall risk and maximize health outcomes by achieving several intermediate physiological targets and medication use targets.

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.

1c.4. Describe how the aggregation and weighting of the component measures are consistent with the stated quality construct and rationale.

Numerator is calculated at the patient level and numerator compliance is defined as the patient achieving all four components of the measure. The components are treated equally; there is no weighting. Some of the components have an exception methodology within allowing a "free-pass" on the component if it does not apply to the patient.

Most recent blood pressure in the measurement period is less than 140 systolic AND less than 90 diastolic (applies to all denominator patients)

AND

Statin Use if appropriate and no contraindications/ exceptions

IVD patients age 18-20 "free-pass"

Age 21 to 75 on statin unless LDL < 40 or contraindications/exceptions

AND

Patient's tobacco status (documented within the last 2 years) is tobacco free (applies to all denominator patients)

AND

Daily aspirin or anti-platelet use unless contraindications/exceptions.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. ***Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.***

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area *(check all the areas that apply):*

Cardiovascular, Cardiovascular : Coronary Artery Disease

De.6. Non-Condition Specific*(check all the areas that apply):*

Person-and Family-Centered Care

De.7. Target Population Category *(Check all the populations for which the measure is specified and tested if any):*

Populations at Risk

S.1. Measure-specific Web Page *(Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)*

http://helpdesk.mncm.org/helpdesk/KB/View/24186819-optimal-vascular-care-data-collection-technical-guide

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure **Attachment:**

S.2b. Data Dictionary, Code Table, or Value Sets *(and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)*

Attachment **Attachment:** MNCM_-0076_Optimal_Vascular_Care_Specs_Fields_12-2019.xlsx

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure **Attachment:**

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

Yes

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

There were no changes to the measure construct, components or composite structure since its last maintenance endorsement review in 2016. However, two other changes were made.

One change is related to the determination of "established patient" moving from a denominator methodology of counting visits to one of using a combination of active problem list diagnosis and established patient visit during the measurement period. The visit counting method of 2 visits in two years was artificially removing many patients with known ischemic vascular disease (eligible patients) from the denominator because they had one visit coded but not two. This change was fully tested and approved by our MNCM Measurement and Reporting Committee in 2015 for the 2017 report year. For the Optimal Vascular Care measure, a 43% increase in the denominator was noted when using the new method which is more reflective of patients that have ischemic vascular disease, a chronic condition that really doesn't go away.

Updated reliability and validity testing results provided in the scientific testing template.

Another change is related to a risk adjustment variable (deprivation index) that was added to the model; this will be fully explained, and results provided in the scientific testing template.

S.4. Numerator Statement *(Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.*

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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

S.5. Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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.

S.6. Denominator Statement *(Brief, narrative description of the target population being measured)*

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.

S.7. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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)

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

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.

S.9. Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

* 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

S.10. Stratification Information *(Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)*

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/2020/01/2018-Disparities-Report-Final.pdf

https://mncm.org/wp-content/uploads/2020/01/2018-Disparities-Report-By-RELC.pdf

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)

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

Statistical risk model

If other:

S.12. Type of score:

Ratio

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 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.

S.15. Sampling *(If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)*

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

Medical groups are encouraged to submit their full population of patients when possible (EMR) however clinics who are on a paper chart system are allowed to create a random sample of no less than 60 patients per

clinic site. MNCM recommends that medical groups submit total population for each measure. By submitting total population, the confidence interval around the rate narrows, indicating a higher confidence that the rate accurately reflects the clinics' performance. If total population is not an option for a medical group, MNCM encourages medical groups to submit a large sample. The minimum required sample is 60 patients per clinic site, per measure. If a clinic site has less than 60 patients in the total population for the measure, the entire population must be submitted.

For 2018 dates of service 100% submitted total population, one remaining clinic on paper records did submit data for its full population, therefore data analyzed represents no sampling as described below.

Excel's Random Number Generator Instructions:

For lists generated in Excel, use the "RAND" function to assign a random number to each record (please also see Microsoft Excel Help, topic RAND for more information):

1. Insert a blank column on the leftmost side of the spreadsheet

2. Label new column "RAND"

3. Place cursor in the first blank cell (A2) and type =RAND()

4. Press enter (a number like 0.793958 will appear)

5. Place the cursor back into this cell; resting over the corner to have the pointer change to a black cross, double click or drag the formula down to the last row/patient

6. Highlight the whole column and click Edit, Copy, Paste Special = Values to freeze the random number (otherwise it will change with every click on the spreadsheet)

7. Sort entire patient population by this new random number

8. Work down the list row by row, starting with row 1 until the number of records in the sample is met for submission (at least 60 patients per clinic, per measure)

9. If a patient meets one of the accepted exclusions, keep working down the list and use oversamples that are after the number of records in the sample. For example, if 60 records will be submitted and 2 exclusions were found, include patient rows 61 and 62 to replace the excluded records.

S.16. Survey/Patient-reported data *(If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)*

Specify calculation of response rates to be reported with performance measure results.

Not applicable

S.17. Data Source *(Check ONLY the sources for which the measure is SPECIFIED AND TESTED).*

If other, please describe in S.18.

Electronic Health Records, Paper Medical Records

S.18. Data Source or Collection Instrument *(Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)*

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

An 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.

S.19. Data Source or Collection Instrument *(available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)*

Available at measure-specific web page URL identified in S.1

S.20. Level of Analysis *(Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)*

Clinician : Group/Practice

S.21. Care Setting *(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)*

Outpatient Services

If other:

S.22. <u>COMPOSITE Performance Measure</u> - Additional Specifications *(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)*

Calculation of the patient level all-or-none composite measure is indicated 1) in the measure algorithms provided in the data dictionary. 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. Individual component logic is included below:

Denominator is the same for calculating individual component rates as the patient level all-or-none composite measure: Patients ages 18 to 75 with ischemic vascular disease who have a diagnosis of ischemic vascular disease (IVD) on any contact/ encounter during the measurement period or the year prior AND/OR an active diagnosis of IVD on the problem list AND an established patient office visit (CPT) during the measurement (established patient). Exclusions are: permanent nursing home resident, hospice or palliative care, and death.

Component for Blood Pressure Control:

Is the BP date in the measurement year? If No, fails the numerator. If Yes, assess next variable.

Is the most recent BP value less than 140 systolic AND less than 90 diastolic? If Yes, is in the numerator for this component.

Expressed as a rate:

Patients with most recent BP during the measurement year is less than 140 systolic AND 90 diastolic/

Eligible patients with ischemic vascular disease

Component for Cholesterol/ Statin Use:

Is the patient on a statin medication? If yes, and most recent date is in the measurement year, is in the numerator for this component.

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, in the numerator (free-pass), if no, assess next variable.

Patient age 21 to 75- Is their most recent LDL in the last five years less than 40? If Yes, in the numerator (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 in the numerator. If no, fail this numerator component and remains in the denominator.

Expressed as a rate:

Patients with statin use unless with contraindications/ exceptions/

Eligible patients with ischemic vascular disease

Component for Tobacco-Free:

Is the date of smoking status in the measurement year or the year prior? If No, fails the numerator. If Yes, assess next variable.

Is the patient's tobacco status noted as tobacco-free? If Yes, is in the numerator.

Expressed as a rate:

Patients with most recent tobacco status during the measurement year or the year prior is free of all tobacco products (tobacco free)/ Eligible patients with ischemic vascular disease

Component for 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.

Expressed as a rate:

Patients with daily aspirin/ anti-platelet use unless with contraindications/ exceptions/Eligible patients with ischemic vascular disease

2. Validity – See attached Measure Testing Submission Form

03-_composite_testing_attachment__OVC_MNCM_Dec_2019.docx

2.1 <u>For maintenance of endorsement</u>

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.2 <u>For maintenance of endorsement</u>

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.3 <u>For maintenance of endorsement</u>

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

Yes - Updated information is included

Measure Testing (subcriteria 2a2, 2b1-2b6)

Measure Number (*if previously endorsed*)**:** 0076

Composite Measure Title: Optimal Vascular Care
Date of Submission: 12/15/2019

Composite Construction:

☐Two or more individual performance measure scores combined into one score

☒ All-or-none measures (e.g., all essential care processes received or outcomes experienced by each patient)

1. DATA/SAMPLE USED FOR ALL TESTING OF THIS MEASURE

Often the same data are used for all aspects of measure testing. In an effort to eliminate duplication, the first five questions apply to all measure testing. If there are differences by aspect of testing,(e.g., reliability vs. validity) be sure to indicate the specific differences in question 1.7.

1.1. What type of data was used for testing? (*Check all the sources of data identified in the measure specifications and data used for testing the measure. Testing must be provided for all the sources of data specified and intended for measure implementation.* ***If different data sources are used for different components in the composite, indicate the component after the checkbox. If different data sources are used for the numerator and denominator, indicate N [numerator] or D [denominator] after the checkbox.***)

Measure Specified to Use Data From: (***must be consistent with data sources entered in S.17***)	**Measure Tested with Data From:**
☒ abstracted from paper record	☒ abstracted from paper record
☐ claims	☐ claims
☐ registry	☐ registry
☒ abstracted from electronic health record	☒ abstracted from electronic health record
☐ eMeasure (HQMF) implemented in EHRs	☐ eMeasure (HQMF) implemented in EHRs
☐ other: Click here to describe	☐ other: Click here to describe

1.2. If an existing dataset was used, identify the specific dataset (*the dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry*).

In 2010 (2009 dates of service), 128 medical groups representing 573 physician clinics and 95,791 patients with IVD in Minnesota and neighboring communities submitted data for this measure. Of the 95,791 IVD patients, a sample of 63,241 patients was submitted for rate calculation. 79% of the clinics submitted full population data, 21% of clinics submitted a random sample. Dates of service included 01/01/2009 to 12/31/2009 (LDL date of service was a 15-month time frame 10/01/2008 to 12/31/2009).

The data submitted represents 66% of all eligible patients; based on the large sample size, the results can be reliably reproduced. The data submission process requires individual patient data for each component of the "all or none" composite measure (e.g., most recent LDL value and blood pressure in the measurement period). This information is accurately captured as evidenced by post submission validation audits against the patient's medical record.

[2016 with 2015 Dates of Service]

Existing data is used. Data is collected and reported on an annual basis for this measure in MN and surrounding border communities. In 2016 (2015 dates of service), 111 medical groups representing 671 physician clinics and 104,494 patients with IVD in Minnesota and neighboring communities submitted data for this measure. Of the 104,494 IVD patients, 104,395 patients were submitted for rate calculation. 99.6% of the

clinics submitted full population data, with only 3 clinics submitting a random sample. Dates of service included 01/01/2015 to 12/31/2015.

The data submitted represents 99.9% of all eligible patients; based on the large sample size, the results can be reliably reproduced. The data submission process requires individual patient data for each component of the "all or none" composite measure (e.g., most recent blood pressure values in the measurement period). This information is accurately captured as evidenced by post submission validation audits against the patient's medical record.

Types of fields included in the submission for 2015 dates of service include the following:

Clinic ID ▪ Patient ID ▪ Patient Date of Birth ▪ Patient Gender Zip Code, Primary Residence ▪ Race/Ethnicity1 ▪Race/Ethnicity2 ▪ Race/Ethnicity3 ▪ Race/Ethnicity4 ▪ Race/Ethnicity5 ▪ Country of Origin Code ▪ Country of Origin "Other" Description ▪ Preferred Language Code ▪ Preferred Language "Other" Description ▪ Provider NPI ▪ Provider Specialty Code ▪ Insurance Coverage Code ▪ Insurance Coverage "Other" Description ▪Insurance Plan Member ID ▪Patient Has Diabetes? ▪ Patient Has Depression? ▪ LDL Date ▪ LDL Value ▪ BP Date ▪ BP Systolic ▪ BP Diastolic ▪ Statin Medication ▪ Statin Medication Date ▪ Statin Medication Exception ▪ Statin Medication Exception Date▪ Aspirin or Anti-platelet Medication ▪ Aspirin or Anti-platelet Medication Date ▪ Aspirin or Anti-platelet Medication Exception ▪ Aspirin or Anti-platelet Medication Exception Date ▪ Tobacco Status Documentation Date ▪ Tobacco Status

[2019 with 2018 Dates of Service]

Existing data is used. Data is collected and reported on an annual basis for this measure in MN and surrounding border communities. In 2019 (2018 dates of service), 99 medical groups representing 677 physician clinics and 185,840 patients with IVD in Minnesota and neighboring communities submitted data for this measure. All clinics submitted full population data. Dates of service included 01/01/2018 to 12/31/2018.

1.3. What are the dates of the data used in testing? 1/1/2009 to 12/31/2009, 1/1/2015 to 12/31/2015, 1/1/2018 to 12/31/2018

1.4. What levels of analysis were tested? (*testing must be provided for <u>all</u> the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan*)

Measure Specified to Measure Performance of: (*must be consistent with levels entered in item S.20*)	**Measure Tested at Level of:**
☐ individual clinician	☐ individual clinician
☒ group/practice	☒ group/practice
☐ hospital/facility/agency	☐ hospital/facility/agency
☐ health plan	☐ health plan
☐ other: Click here to describe	☐ other: Click here to describe

1.5. How many and which <u>measured entities</u> were included in the testing and analysis (by level of analysis and data source)? (*identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample*)

[2010 with 2009 Dates of Service]

Characteristics of the entities reporting data:

Based on number of physicians, the size of the 128 medical groups that submitted data ranged from one-physician practices to medical groups with more than 2,700 physicians. Ranges include: Medical groups with <25 physicians = 87; medical groups with 25-99 physicians = 25; medical groups with 100-249 physicians = 5; medical groups with 250+ physicians = 11. 50 medical groups were located within the Twin Cities metro area,

while 78 medical groups were located outside of the Twin Cities metro area. 110 medical groups were identified as primary care clinics, 17 medical groups were identified as multi-specialty clinics, and one group was identified as a single-specialty clinic (cardiology).

Of the 573 clinic sites that reported data, 455 clinics used an electronic medical record in some capacity for the clinical data collection (data extraction/query, or manual data abstraction), and 118 clinics used paper records for the clinical data collection.

[2016 with 2015 Dates of Service]

Characteristics of the entities reporting data:

Based on number of physicians, the size of the 111 medical groups that submitted data ranged from one-physician practices to medical groups with more than 500 physicians. Ranges include: Medical groups with <25 physicians = 80; medical groups with 25-99 physicians = 15; medical groups with 100-249 physicians = 9; medical groups with 250+ physicians = 7. 39 medical groups were located within the Twin Cities metro area, while 72 medical groups were located outside of the Twin Cities metro area. 52 medical groups were identified as primary care clinics, 52 medical groups were identified as multi-specialty clinics with 22 inclusive of cardiology, and one group was identified as a single-specialty clinic (cardiology).

Of the 671 clinic sites that reported data, 57% used their EMR exclusively to extract data, 40% supplemented data extraction with some chart abstraction and 3% relied on manual abstraction processes of their EMR or paper based record. Interestingly, in 2010 118 clinics in MN had paper based system, in 2015 only 5 clinics are on a paper based system.

[2019 Update]

For the 677 clinics reporting on this measure, 99.9% are on electronic health records and all submitted full population (no sample). 71% of the clinics used their EHR exclusively to extract all data elements needed.

1.6. How many and which <u>patients</u> were included in the testing and analysis (by level of analysis and data source)? (*identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis); if a sample was used, describe how patients were selected for inclusion in the sample*)
In 2010 (2009 dates of service), 128 medical groups representing 573 physician clinics and 95,791 patients with IVD in Minnesota and neighboring communities submitted data for this measure. Of the 95,791 IVD patients, a sample of 63,241 patients was submitted for rate calculation.

[2016 with 2015 Dates of Service]

111 medical groups representing 671 physician clinics and 104,494 patients with IVD in Minnesota and neighboring communities submitted data for this measure. Of the 104,494 IVD patients, 104,395 patients were submitted for rate calculation. 99.6% of the clinics submitted full population data, with only 3 clinics submitting a random sample.

[2019 Update]

99 medical groups representing 677 physician clinics and 185,840 patients with IVD in Minnesota and neighboring communities submitted data for this measure.

1.7. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing reported below.

There are no differences.

1.8 What were the social risk factors that were available and analyzed? For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient

(e.g. census tract), or patient community characteristics (e.g. percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.

[2016 with 2015 Dates of Service]

Insurance product as a proxy for socioeconomic status. Insurance Coverage Code is included in the patient level file that is submitted from the medical group and is translated to a higher level insurance product (commercial, Medicare, MHCP- state public program and uninsured). Insurance product has demonstrated properties for inclusion in a risk adjustment model (t-tests < 0.01 to 0.02).

[Update for 2019 Submission; Risk Model Augmented from original submission. Please note that risk adjustment variables are the only change to the measure since last endorsed in 2016]

The social risk factors that were available and analyzed include insurance product type and deprivation index as proxies for socioeconomic status and race, Hispanic ethnicity, preferred language and country of origin (RELO) data.

- Health insurance coverage information is included in the patient level file that is submitted from the medical group and is translated to specific insurance product type (commercial, Medicare, Medicaid, uninsured and unknown). Insurance product type has demonstrated properties for inclusion in risk adjustment models (p-values < 0.01 to 0.02).

- The deprivation index is a calculation based on US Census Data at the patient's zip code level that considers the percentage of people in that zip code with supplemental nutrition assistance program (SNAP) benefits, in poverty, unemployed, on public assistance and single females with children. The five census variables are centered to zero and are run through a factor analysis to create a single deprivation index for each patient.

- MNCM considered the inclusion of race, Hispanic ethnicity, preferred language and country of origin (RELO) as potential risk adjustment variables. While there are significant differences in outcome when segmenting the data by RELO variables, these variables are not used in risk adjustment because it is impossible to separate the disparity in outcome between the patient's environment and the clinic's contribution to the disparity specific biases from healthcare providers that influence their interactions with patients.
  - MNCM convened a panel of social science researchers from the University of Minnesota in August 2016 to understand if RELO variables were confounded by the clinic's contribution. For every measure and for every factor, as a group, the researchers were hard pressed to find a conceptual relationship that was not confounded by the clinic's contribution. This is confirmed in the social science literature available on the topic.
  - The panel recommended use of geography instead, specifically neighborhood characteristics which lead to the development of the deprivation index mentioned above.

2a2. RELIABILITY TESTING

***Note**: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – in 2a2.1 check critical data elements; in 2a2.2 enter "see section 2b2 for validity testing of data elements"; and skip 2a2.3 and 2a2.4.*

2a2.1. What level of reliability testing was conducted? (*may be one or both levels*)

***Note**: Current guidance for composite measure evaluation states that reliability must be demonstrated for the composite performance measure score.*

☒ **Performance measure score** (e.g., *signal-to-noise analysis*)

2a2.2. Describe the method of reliability testing and what it tests (*describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used*)

Used paper "Reliability in Provider Profiling" by John L. Adams, Ph.D as a reference

The BETABIN macro was used on each measure (SAS).

- First, we need to find the provider-to-provider variance:
  - $\sigma^2 = (\alpha\ \beta) / (\alpha + \beta + 1)(\alpha + \beta)^2$
  - $= (8.195 * 10.324) / (8.195 + 10.324 + 1)(8.195 + 10.324)^2$
  - = **0.0126** (plug this value into the reliability equation)
- Reliability = $\sigma^2 / (\sigma^2 + (p(1 - p)/n))$
  - p = rate
  - n = number of eligible patients
- Determine reliability rate for each provider.
- Average the reliability rate.

2a2.3. What were the statistical results from reliability testing? (e*.g., percent agreement and kappa for the critical data elements; distribution of reliability statistics from a signal-to-noise analysis*)

Reliability = 0.9068

BETABIN Macro: Simple Binomial Model

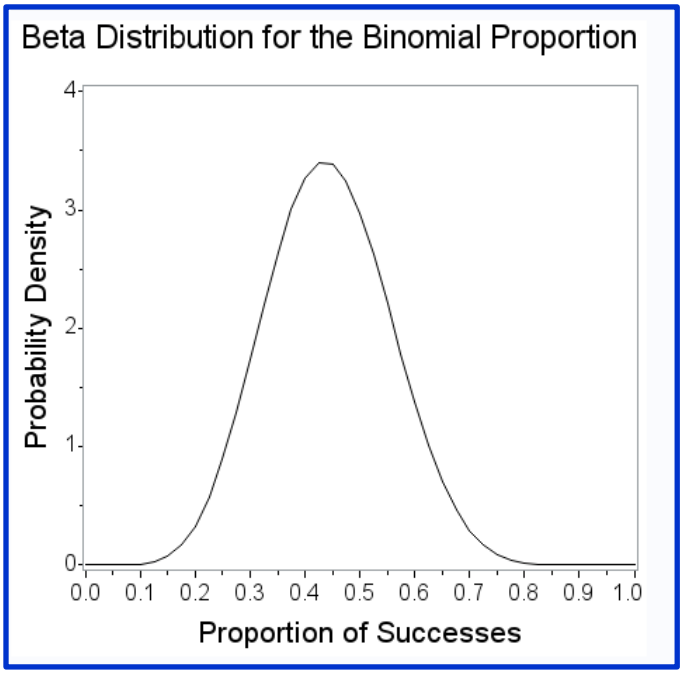
Parameter	Estimate	Standard Error	t Value	Prob > absolute value of t	Alpha	Lower	Upper
mu	0.4664	0.0010	473.12	<.0001	0.05	0.4644	0.4683
Absolute value mu-0.5	0.0336	0.0010	34.13	<.0001	0.05	0.0317	0.0356

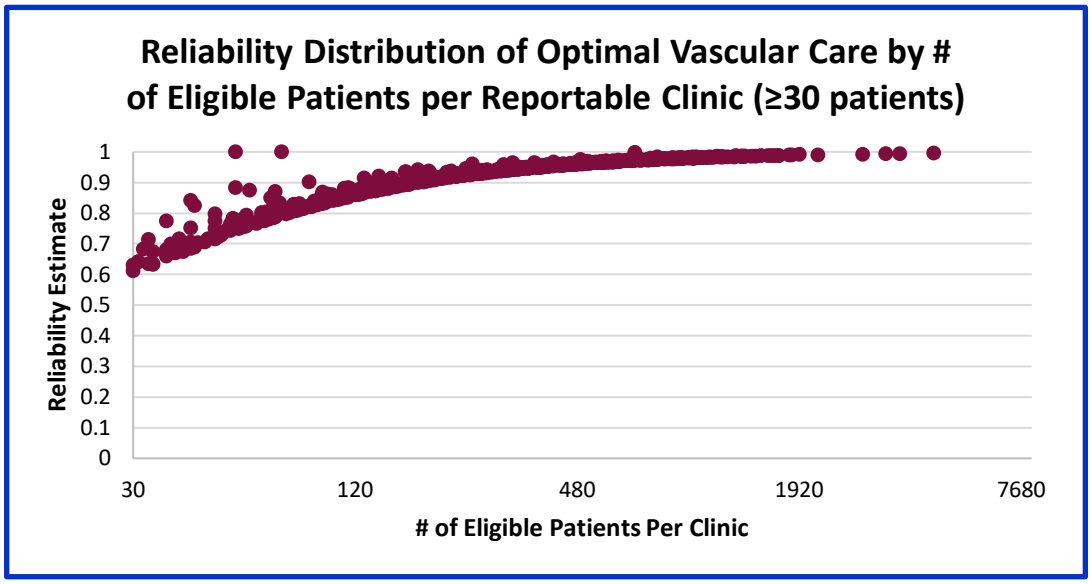
BETABIN Macro: Beta-Binomial Model Parameters

Parameter	Estimate	Standard Error	t Value	Prob > absolute value of t	Alpha	Lower	Upper
mu	0.4425	0.004777	92.65	<.0001	0.05	0.4332	0.4519
alpha	8.1950	0.5307	15.44	<.0001	0.05	7.1548	9.2351
beta	10.3237	0.6644	15.54	<.0001	0.05	9.0215	11.6260
gamma	0.05123	0.003102	16.52	<.0001	0.05	0.04515	0.05731
theta	0.05400	0.003446	15.67	<.0001	0.05	0.04725	0.06075
Absolute value mu-0.5	0.0336	0.0010	34.13	<.0001	0.05	0.0317	0.0356

BETABIN Macro: Variance-Covariance Matrix of Estimated Parameters

Label	mu	alpha	beta	gamma	theta
mu	0.000023	0.000431	-0.00041	-5.16E-8	-5.73E-8
alpha	0.000431	0.2816	0.3367	-0.00162	-0.00180
beta	-0.00041	0.3367	0.4414	-0.00204	-0.00227
gamma	-5.16E-8	-0.00162	-0.00204	9.622E-6	0.000011
theta	-5.73E-8	-0.00180	-0.00227	0.000011	0.000012





☐ **Endorsed (or submitted) as individual performance measures**

☒ **Critical data elements** (*data element validity must address ALL critical data elements*)

☒ **Empirical validity testing of the component measure score(s)**

☐ **Systematic assessment of face validity of component measure score(s) as an indicator** of quality or resource use (*i.e., is an accurate reflection of performance on quality or resource use and can distinguish good from poor performance*)

2b1.2. For each level of testing checked above, describe the method of validity testing and what it tests (*describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used)*

Critical Data Element:

[2010 Validation Audit Results:]

Of the 128 medical groups submitting data in 2010, 17 groups initially failed the audit and remedy plans were developed. All 17 groups resubmitted and passed subsequent audit.

Types of Errors Found in Validation Audits: BP was not most recent, EMR did not pull the correct date or value, ASA date could not be validated, ASA date not reported, LDL date not reported or more recent date found, and Tobacco status was not correct.

Validating the submitted data via the direct data submission process is completed in four steps: denominator certification, data quality checks, validation audit, and the two-week medical group review period.

Denominator certification prior to data collection and extraction/ abstraction ensures that all medical groups apply the denominator criteria correctly and in a consistent manner. MNCM staff review the documentation to verify all criteria were applied correctly, prior to approval for data submission.

Denominator certification documentation for this measure includes:

- Date of Birth (ranges)
- Date of Service (ranges)
- ICD-9 /ICD-10 Codes used
- Eligible specialties and provider types
- Exclusions to the measure and attest to mechanism for exclusions
- Attestations related to changes in medical record or billing systems
- Supplying all query code for review

Common areas of correction in denominator for this measure included missing query code, incorrect date of birth ranges, incorrect dates for counting visits, missing ICD-9 or ICD-10 codes or incomplete attestation. All were corrected prior to data submission.

Following data submission to the MNCM Data Portal, there are additional data quality checks in place for evaluating the accuracy of data submitted. During file upload, program checks for valid dates, codes and values and presents users with errors and warnings. Additionally, MNCM staff review population counts (denominator) and outcome rates for any significant variance from the previous year's submission and may prompt further clarification from the medical group.

Validation audits verify that the clinical data submitted for the numerator component of the measure matched the data in the patient record. Other data elements are also audited to verify the patient was included in the denominator correctly (e.g., diagnosis of ischemic vascular disease).

Critical Data Element

[2015 Validation Audit Results:]

In 2015, for the vascular measure, MNCM audited 123 medical groups; 80% of those submitting data. 81% passed the initial audit, 19% required a correction plan and all re-submitted their data and passed the audit with ≥ 90% accuracy. Types of discrepancies noted on audit included: aspirin date during the measurement period, tobacco status, date of birth errors, most recent blood pressure, and inclusion of patient without the diagnosis of IVD.

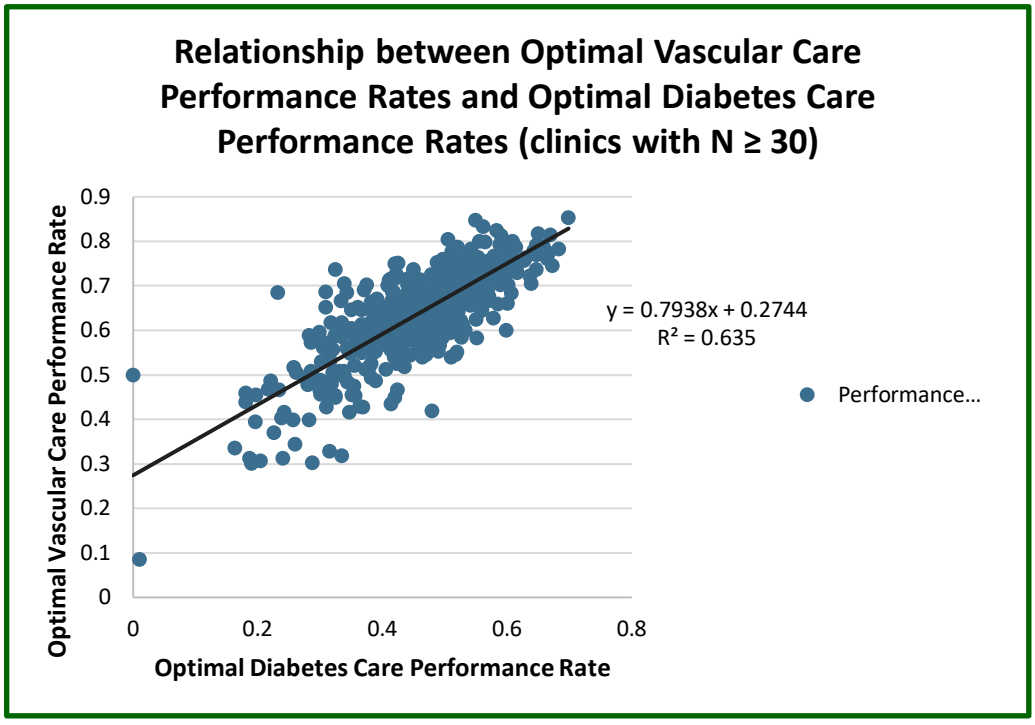
[2019 update]

30% of groups that submitted data were audited and of those 85% passed initial audit; groups with errors made correstions and resubmitted. Types of errors included missing or incorrect component data and inconclusive exclusion reasons. One group elected to not proceed with corrections and that data was removed.

Validity was tested for the computed composite score by testing the correlation of medical group performance with their performance on the Optimal Diabetes Care measure (NQF# 0729). Ischemic vascular disease and diabetes are chronic conditions that require ongoing management of multiple risk factors in order to reduce a patient's overall risk of developing long term complications. It is expected that the quality of care provided by a medical group to patient with ischemic vascular disease would be of similar quality as the care provided to patients with diabetes, and the respective performance measure scores should demonstrate such.

2b1.3. What were the statistical results from validity testing? (*e.g., correlation; t-test*)

Based on linear regression analysis, a medical group's performance on the Optimal Vascular Care measure is associated with its performance on the Optimal Diabetes Care measure, as demonstrated by an r^2 value of 64%, representing a fairly strong correlation.

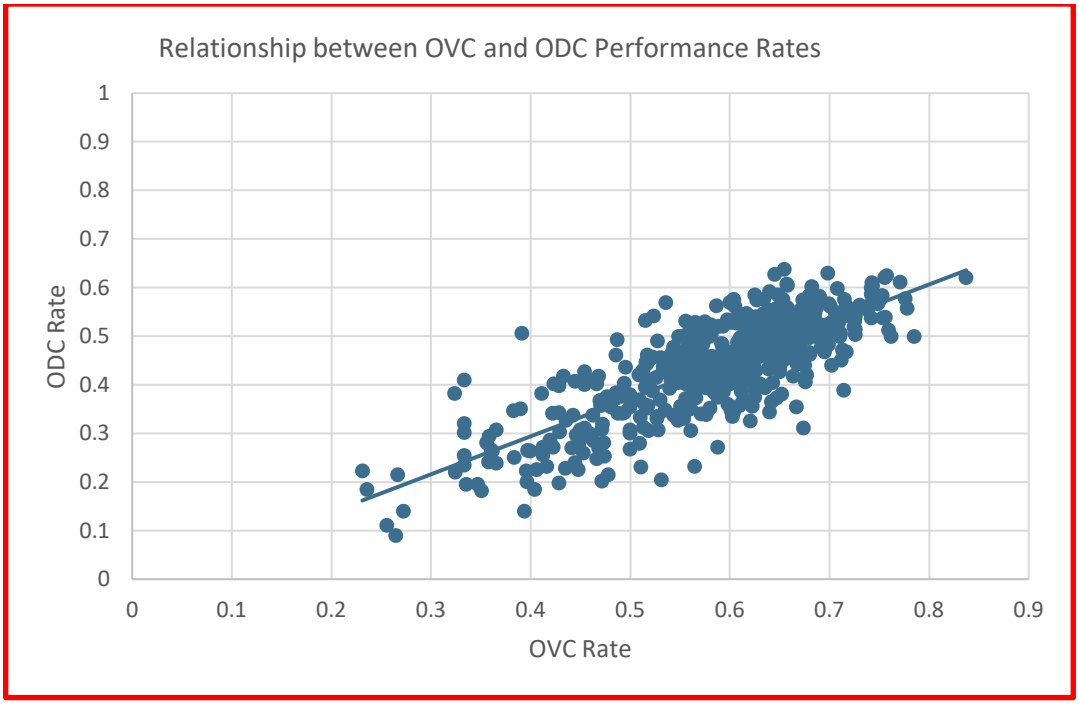


[2019 Submission update; testing with more inclusive denominator]

Conducted in 2018 (2017 dates of service)

after problem list/established patient denominator method change

r^2 = 63%



2b1.4. What is your interpretation of the results in terms of demonstrating validity? (i.*e., what do the results mean and what are the norms for the test conducted?*)
High compliance with critical data element validity as demonstrated by annual validation audit processes.

As demonstrated by the r^2 value, 64% of the total variation in performance on the Optimal Vascular Care measure can be explained by variation in the Optimal Diabetes Care measure. This degree of correlation indicates that the Optimal Vascular Care composite measure score accurately reflects the quality of care provided.

Little to no change in r^2 value with the application of a new method (replaces visit counting) using active problem list and established patient visit during the measurement period demonstrated measure stability.

2b2. EXCLUSIONS ANALYSIS

Note: *Applies to the composite performance measure, as well all component measures unless they are already endorsed or are being submitted for individual endorsement.*

NA ☐ no exclusions — *skip to section 2b4*

2b2.1. Describe the method of testing exclusions and what it tests (*describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used*)
[2010 Exclusion Testing Results:]

In addition to the denominator certification process that describes how groups excluded patients, we asked groups to record all the individual patients that they excluded and the reasons for the exclusions. Groups submitted a list of excluded patients to MNCM. The total number of exclusions submitted (n = 1,403) in 2010 was 2.2% of the number of patients submitted (1,403/63,241). Clinics that submitted excluded patients most often manually documented exclusions upon record review. Some clinics with an EMR were also able to submit patients that they were able to filter out of the patient population (e.g., deceased patients).

If a clinic elected to take allowable exclusions, they were required to submit a list of excluded patients along with the type of exclusion per patient. MNCM conducted a review of all exclusions taken to validate that only allowable exclusions were taken and to identify the number of exclusions by type.

2b2.2. What were the statistical results from testing exclusions? (*include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores*)
The frequency of the use of the exclusions under study was 2.2% of the number of patients submitted (1,403/63,241). Medical group utilization of exclusions: 77 of 128 (60%) of groups submitted exclusions.

[2016 Exclusion Results:]

Total number of exclusions: 1,249/104,395 = 1.20%

- 234 nursing home
- 91 hospice
- 918 deceased
- 6 coded in error

Number of medical groups that submitted exclusions: 51 of 113 (45.1%)

Due to low volume of use, the diagnosis coded in error was removed as an exclusion in 2017.

2b2.3. What is your interpretation of the results in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results? (*i.e., the value outweighs the burden of increased data collection and analysis. Note: **If patient preference is an exclusion**, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion*)
[2016 Exclusion Results:]

Although exclusions are somewhat rare (1.2% of the population), they are necessary for this measure. The upper age limit cut-off does limit the frail elderly population in which the targets may not be appropriate, but allowing these exclusions serves its purpose to capture potentially frail patients who are less than age 75.

2b3. RISK ADJUSTMENT/STRATIFICATION FOR OUTCOME OR RESOURCE USE MEASURES
Note: *Applies to all outcome or resource use component measures, unless already endorsed or are being submitted for individual endorsement.*
If not an intermediate or health outcome, or PRO-PM, or resource use measure, skip to section 2b4.

2b3.1. What method of controlling for differences in case mix is used? *(check all that apply)*

☐ **Endorsed (or submitted) as individual performance measures**

☐ **No risk adjustment or stratification**

☒ **Statistical risk model with Age, insurance product, and deprivation index risk factors**

☐ **Stratification by** Click here to enter number of categories **risk categories**

☐ **Other,**

2b3.1.1 If using statistical risk models, provide detailed risk model specifications, including the risk model method, risk factors, coefficients, equations, codes with descriptors, and definitions.

[Update for 2019 Submission; Risk Model Augmented from original submission.]

- patient age (continuous variable)
- insurance product (proxy for socioeconomic status)
- deprivation index (proxy for socioeconomic status based on 5-digit zip code)

  Comprised of percentage with SNAP benefits, percentage in poverty, percentage unemployment,

percentage on public assistance and percentage single female with child

Since our outcome (dependent) variable is binary (yes/no optimal care was obtained), we use a logistic regression model with the following risk factors included:

- patient age as a continuous variable
- insurance product type as a categorical variable including commercial, Medicare, Medicaid, uninsured, and unknown insurance type as categories, commercial is the reference group in the model, this variable is a proxy for socioeconomic status
- deprivation index as a continuous variable, this variable is a proxy for socioeconomic status based on patient 5-digit zip code, it considers the percentage of people in that 5-digit zip code with SNAP benefits, in poverty, unemployed, on public assistance and single females with children using US Census Data.

Indirect standardization is used for risk adjustment. In this method, **the actual clinic result is not changed**, no matter the degree of patient risk. Instead, an expected value is calculated for each clinic using the logistic regression model run at the patient level and results are aggregated to the clinic level as described above. In this process, the clinics are not to be compared to the state or regional average but instead to their own expected rate. Comparisons between clinics are achieved with a calculation of actual result/expected result and significance testing is performed by using a chi square test.

2b3.2. If an outcome or resource use component measure is not risk adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (case mix) is not needed to achieve fair comparisons across measured entities.

Not applicable

2b3.3a. Describe the conceptual/clinical and statistical methods and criteria used to select patient factors (clinical factors or social risk factors) used in the statistical risk model or for stratification by risk (*e.g., potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of p<0.10; correlation of x or higher; patient factors should be present at the start of care*) **Also discuss any "ordering" of risk factor inclusion;** for example, are social risk factors added after all clinical factors?

[2016 Submission}

The selection of risk factors for adjustment of clinical quality performance measure scores is directed by a framework of criteria that must be considered for each factor[i].

The following criteria are to be applied during:

1.) Measure development when recommending variables for data collection and testing for potential risk adjustment, and
2.) Selection of tested variables for the application of risk adjustment.
3.) Reevaluation of currently applied risk adjustment factors.

Criteria	Rationale
1. Clinical/conceptual relationship with the outcome of interest	A logical theory must explain the association between the factor and the outcome. Begin with conceptual model informed by research and experience; does not required a direct causal relationship.
2. Empirical association with the outcome of interest	A statistical association to confirm the conceptual relationship
3. Variation in prevalence of the factor across the measured entities	If there is no variation in prevalence across providers being measured, it will not bias performance results.
4. Not confounded with quality of care – risk factors should: a. Be present at the start of care and b. Not represent the quality of care provided (e.g., treatments, interventions, expertise of staff)	Trying to isolate effects of the provide – quality of care Ensures not a result of care provided Although these could explain variation in outcome, trying to isolate differences in performance due to differences in the care provided
7. Contribution of unique variation in the outcome (i.e., not redundant or highly correlated with another risk factor	Prevent over-fitting and unstable estimates, or coefficients that appear to be in the wrong direction, reduce data collection burden
Potentially, improvement of the risk model (e.g., risk model metrics of discrimination – i.e., sensitivity/specificity, calibration) and sustained	Change in R-squared or C-statistic may not be significant, but calibration at different deciles of risk might improve May not appear to be a big change but could represent meaningful differences in terms of the outcome (e.g., lives, dollars)

[Update for 2019 Submission; Risk Model Augmented from original submission]

Patient age continues as a statistically significant variable for risk adjustment; however, we are now applying age as a continuous variable and not restricting to age band categories. Additionally, insurance product type is still included in the model and continue to be statistically significant.

Insurance product affects vascular outcomes as shown in OVC analyses stratified by product (MCHP is Medicaid and Other Purchasers include all other insurance types):

Empirical analysis on RELO showed that there were differences in Vascular outcomes based on these social risk factors:

Race/ethnicity (compared to statewide average):

American Indian or Alaskan Native – significantly lower

Asian – significantly higher

Black or African American – significantly lower

Multi-Racial – significantly lower

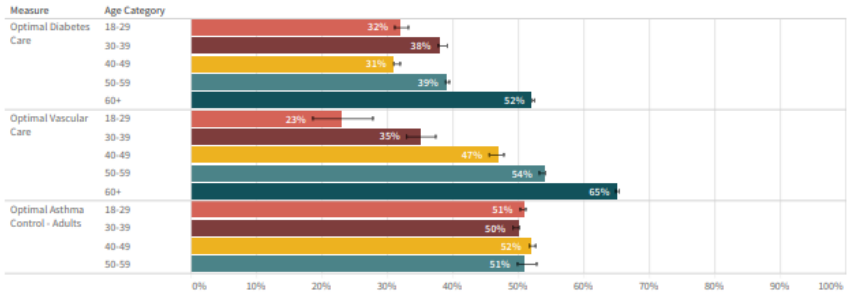
Native Hawaiian or Other Pacific Islander – no difference

White – significantly higher

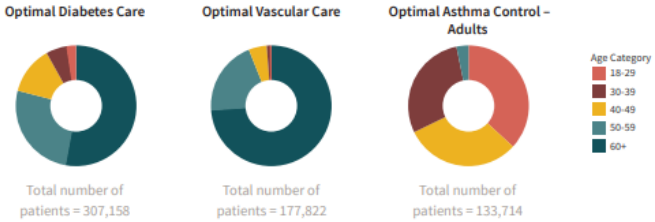
Hispanic – significantly lower

Non-Hispanic – no difference

FIGURE 5: Results by Age Category



Demographic details only available for measures listed above; 95 percent confidence intervals.



Total number of patients = 307,158

Total number of patients = 177,822

Total number of patients = 133,714

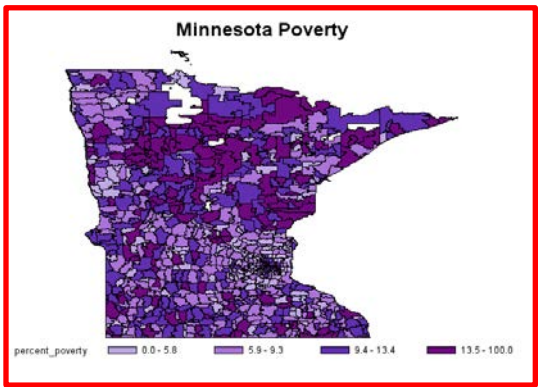
In general, measures of how well chronic conditions are managed mostly improve with age. The highest rates occur among people age 60 and older with ischemic vascular disease.

RELO variables were analyzed and MNCM decided not to use in a risk adjustment capacity.

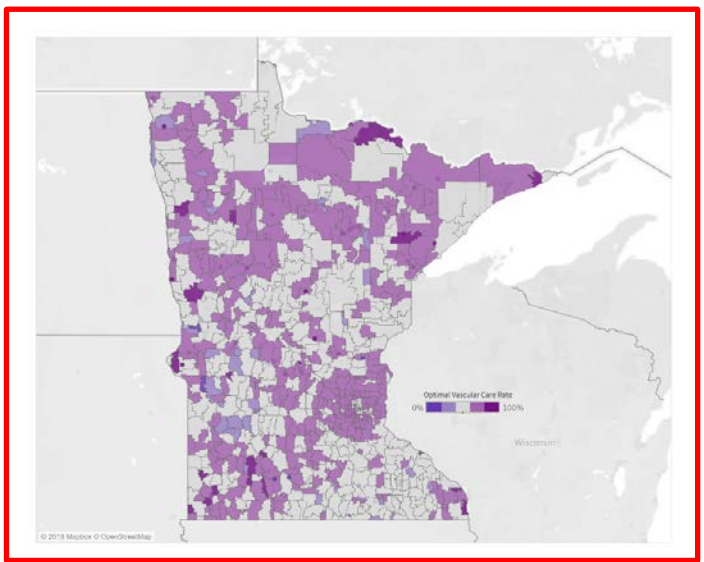
MNCM considered the inclusion of race, Hispanic ethnicity, preferred language and country of origin (RELO) as potential risk adjustment variables. While there are significant differences in outcome when segmenting the data by RELO variables, these variables are not used in risk adjustment because it is impossible to separate the disparity in outcome between the patient's environment and the clinic's contribution to the disparity specific biases from healthcare providers that influence their interactions with patients.

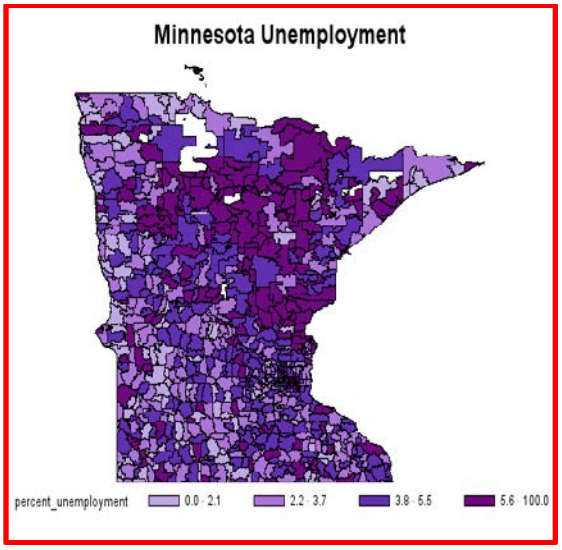
- MNCM convened a panel of social science researchers from the University of Minnesota in August 2016 to understand if RELO variables were confounded by the clinic's contribution. For every measure and for every factor, as a group, the researchers were hard pressed to find a conceptual relationship that was not confounded by the clinic's contribution. This is confirmed in the social science literature available on the topic.
- The panel recommended use of geography instead, specifically neighborhood characteristics which lead to the development of the deprivation index mentioned above.

MNCM investigated optimal vascular care and several social risk factors by patient zip code and observed that there is significant variation by location:



Optimal Vascular Control 2019





These empirical results led us to the development of the deprivation index which is described in detail in section 1.8 and in section 2b3.4b. The deprivation index calculated from U.S. Census information on socioeconomic factors based on the patient's 5-digit zip code.

2018 Sample Index

zip code	Deprivation Index 2018
56666	-6.410464071
56215	-0.221569044
56431	-0.153672949
56373	0.075238384
55041	0.395975943
55558	0.539250422
55596	1.022386827
56541	1.419066512

2b3.3b. How was the conceptual model of how social risk impacts this outcome developed? Please check all that apply:

☒ **Published literature**

☒ **Internal data analysis**

☐ **Other (please describe)**

2b3.4a. What were the statistical results of the analyses used to select risk factors?

Initial analysis was conducted on 2012 measure year:

Effect of Potential Risk Adjusters on OVC: Model without SES and Race from ZIP Code Data

Variable	Contrast	Estimate	T-value	Odds Ratio	Lower 95% CI	Upper 95% CI
Age						

18-25	66-75	-1.12**	-2.71	0.32**	0.14	0.73
26-50	66-75	-0.63**	-18.68	0.53**	0.50	0.57
51-65	66-75	-0.26**	-12.91	0.77**	0.74	0.80
Gender						
Female	Male	-0.32**	-17.95	0.73**	0.70	0.75
Comorbidity						
Depressed	Not Depressed	-0.09**	-4.37	0.91**	0.87	0.95
Distance from Clinic						
<5 miles	Same Zip	0.02	0.71	1.02	0.97	1.07
5-10 miles	Same Zip	0.00	0.19	1.00	0.96	1.06
10-20 miles	Same Zip	0.02	0.66	1.02	0.97	1.07
20+ miles	Same Zip	-0.13**	-4.74	0.87**	0.83	0.92
Insurance						
Medicare	Commercial	-0.06**	-2.79	0.94**	0.90	0.98
Medicaid / MSHO / Special Needs / Self-pay / Uninsured	Commercial	-0.75**	-28.61	0.47**	0.45	0.50
Constant		-0.29	-1.01			

[Update for 2019 Submission; Risk Model Augmented from original submission]

OVC Measure, 2018 Dates of Service, default is Commercially Insured patient

Parameter	**DF**	**Standard Estimate**	**Wald Error**	**Chi-Square**	**Pr > ChiSq**
Intercept	1	-1.9029	0.0427	1985.6	<.0001
patient_age	1	0.0396	0.000716	3057.1	<.0001
medicare	1	-0.2369	0.0132	324.2	<.0001
mhcp	1	-0.5654	0.0180	982.2	<.0001
uninsured	1	-0.4779	0.0392	148.9	<0.0001
undetermined	1	0.0307	0.0208	2.2	0.1399
dep_index	1	0.1050	0.00633	275.02	<.0001

2b3.4b. Describe the analyses and interpretation resulting in the decision to select social risk factors (e.g. prevalence of the factor across measured entities, empirical association with the outcome, contribution of unique variation in the outcome, assessment of between-unit effects and within-unit effects.) Also describe the impact of adjusting for social risk (or not) on providers at high or low extremes of risk.

[2016 Submission]

While Age, Insurance Product, Gender and Depression all made the initial statistical requirement of significant variation in results, Gender did not show enough variation between clinics to contribute to the unique variation of clinic level results (Criteria #3) and depression was not selected due to relative high cost of collection.(Criteria #7)

Race, Ethnicity, Language and Country of Origin (RELO) did not have a high completion rate across all clinics to be considered for risk adjustment at this time, we are continuing to work with the medical community to achieve the goal of evaluating RELO at the clinic level.

Therefore the risk variables selected were Age and Insurance Product.

[Update for 2019 Submission; Risk Model Augmented from original submission.]

The social risk factors included in our model are patient's insurance type and a deprivation index which have been described above. Because deprivation index is a new risk factor since our last submission, a description of the process used to determine inclusion of the deprivation index in our risk adjustment model is included.

Summary of MNCM study: Impact of Adjusting Measures for Patients' Neighborhood Socio-Economic Status

Reminder of Goal and Methodology:

- Goal: to isolate the clinic/medical group's true impact on patients' health and allow them to be compare more easily.
- MNCM utilizes an indirect standardization methodology for risk adjustment
- Each clinic/medical group's rate is compared to a unique benchmark rate for that clinic/medical group that is based on the mix of patient risk seen at that clinic/medical group

Study question: How to measure the impact of where patient live on MNCM quality measures?

1. Literature Review
    a. We examined published, peer- reviewed articles on the creation of a measure for areas socio-economic status (SES).
    b. Key findings:
        i. Census data at the ZIP code level is typically used
        ii. There was not consistent evidence that a more granular geographical unit (Census Track, Census Block) always produced more significant results. It was very measure and situation dependent.
        iii. Principal Components Analysis is used.
        iv. A Deprivation Index is generated.
2. Variable Selection
    a. In line with published literature, we chose the following variables (from the 2015 census data) to evaluate for our deprivation index:
        i. % with SNAP benefits
        ii. % in poverty

iii. % unemployment
iv. % on public assistance
v. % single female w/ child

b. Staff note: Median Income was tested and not retained as a component of the index because this variable behaves differently from the other variables listed above.

3. Correlation Analysis
   a. The high correlation coefficients among the selected variables told us that these variables are likely to converge together into a single deprivation index. All correlations significant (p<.0001)

	% with SNAP benefits	**% in poverty**	**% unemployment**	**% on public assistance**	**% single female w/ child**
% with SNAP benefits	1	0.82	0.82	0.99	0.77
% in poverty		1	0.71	0.83	0.75
% unemployment			1	0.83	0.65
% on public assistance				1	0.78
% single female w/ child					1

4. Variables' contribution to the model

   We evaluated the impact of our deprivation index on already established risk adjustment models for four of our quality measures: depression remission at 12 months, asthma (both adult and pediatric populations) and colorectal cancer screening.

   Variables' contribution was assessed through logistic regression by comparing R2 values (a measure of a model explanatory power) and comparing variable standardized estimate values (a measure of the "importance" of each variable in a model). Below are the results of the analysis:

   - The depression remission at 12 months measure is adjusted by insurance product, initial depression severity, age and we added the deprivation index. Here are the results obtained through logistic regression:
     - Patient level R2: 0.0089 (vs. 0.0085 without the deprivation index)
     - All control variables reach statistical significance (p<.0001)

* 5-digit zip code was utilized for the analysis of the deprivation index

For the OVC patient population, the Deprivation Index ranges from -6.84 to 1.42. The index is centered at 0 and a higher number indicates a higher socioeconomic level.

The table below is an illustration of the impact of the deprivation index. The file was calculated both with and without using the ZIP Code level deprivation Index. 22 out of 566 (3.9%) medical clinics had a difference in the comparison to the mean when the ZIP Code level Socioeconomic factors were included

It is is important to note that the 7 clinics with raised expected values are all in wealthier suburbs and the 15 with lower expected values are either rural or inner city. This is exactly the result that was anticipated and shows that the deprivation index is working as expected.

Clinics with change in comparison to the mean when adding ZIP Code level Socioeconomic Factors into Expectation

			Risk Adjustment Age, Product		Risk Adjustment Age, Product, ZIP Code Level SES			
Area Type	**Patients**	**Actual Rate (%)**	**Expected Rate (%)**	**Comparison to Mean**	**Rate (%)**	**Mean**	**Change (%)**	**Change**
Rural	39	33.3	59.0	Below Expected	54.9	Expected	-4.1	Lower Expectation
Urban	102	61.8	55.5	Expected	52.1	Above Expected	-3.4	Lower Expectation
Urban	69	33.3	51.7	Below Expected	48.4	Expected	-3.3	Lower Expectation
Rural	132	35.6	50.3	Below Expected	47.3	Expected	-2.9	Lower Expectation
Urban	232	44.8	54.9	Below Expected	52.7	Expected	-2.2	Lower Expectation
Rural	174	47.7	59.2	Below Expected	57.1	Expected	+2.1	Lower Expectation
Urban	183	47.0	58.3	Below Expected	56.5	Expected	+1.8	Lower Expectation
Urban	625	66.2	61.5	Expected	59.8	Above Expected	-1.7	Lower Expectation
Urban	594	66.3	61.2	Expected	59.7	Above Expected	-1.5	Lower Expectation
Rural	108	43.5	57.8	Below Expected	56.4	Expected	-1.4	Lower Expectation
Rural	56	75.0	63.6	Expected	62.3	Above Expected	-1.3	Lower Expectation
Urban	990	65.0	60.9	Expected	59.7	Above Expected	-1.3	Lower Expectation
Urban	320	67.5	60.9	Expected	59.8	Above Expected	-1.0	Lower Expectation
Urban	391	69.6	63.2	Expected	62.4	Above Expected	-0.8	Lower Expectation
Rural	853	66.5	62.0	Expected	61.4	Above Expected	-0.6	Lower Expectation
Suburb	42	76.2	62.7	Expected	63.0	Above Expected	0.3	Higher Expectation
Rural	48	69.6	59.7	Expected	60.2	Below Expected	0.5	Higher Expectation
Suburb	229	72.5	63.7	Above Expected	64.4	Expected	0.6	Higher Expectation
Suburb	457	67.2	61.0	Above Expected	62.0	Expected	1.0	Higher Expectation
Suburb	617	66.9	61.0	Above Expected	62.2	Expected	1.1	Higher Expectation

Suburb	477	71.5	65.3	Above Expected	66.6	Expected	1.3	Higher Expectation
Suburb	151	51.7	62.5	Expected	64.1	Below Expected	1.6	Higher Expectation

2b3.5. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (*describe the steps—do not just name a method; what statistical analysis was used*)

Provide the statistical results from testing the approach to controlling for differences in patient characteristics (case mix) below.
If stratified, skip to 2b3.9

[2016 Submission]

Because this measure is a binary variable (0 or 1), the risk adjustment model was estimated using a logistic model implemented in the SAS Procedure Glimmix that accounts for its non-continuous nature. The risk adjusters and an indicator for each clinic were included in the model. The estimated coefficient for the clinic indicator measures the clinic's OVC adjusting for the patient risk adjusters that were included in the model. The clinic level indicator was used to construct a risk adjusted OVC score at the clinic level that ranged fromc 0 to 1 (0% to 100%). The effect of risk adjustment on clinic rankings was calculated by comparing the risk adjusted OVC to the unadjusted OVC measure, the average OVC for all patients reported by the clinic.

[2019; please refer to previous response question 2b3.4b.]

2b3.6. Statistical Risk Model Discrimination Statistics (*e.g., c-statistic, R-squared*)**:**

[2016 Submission]

Analysis of Maximum Likelihood Estimates [2014 dates of service]

		n	Optimal Rate	Comparison	t test
Product	Commercial	35,706	71%	Medicare	0.02
	Medicare	55,993	71%		
	MHCP	9,220	54%	Medicare	<.01
	Uninsured	1,735	55%	Medicare	<.01
Age	18-25	44	68%	66-75	0.29
	26-50	7,022	58%	66-75	<.01
	51-65	44,105	66%	66-75	<.01
	66-75	51,483	74%		

[Update for 2019 Submission; Risk Model Augmented from original submission]

		Patients	Rate	Comparison	T Score
Product	Commercial	57,989	60.5%	Medicare	<.001%
	Medicare	94,867	64.0%		
	Medicaid	19,035	41.3%	Medicare	
	Uninsured	2,836	48.7%	Medicare	<.001%

	Unknown	12,965	65.2%	Medicare	<.001%
	Male	123,970	63.9%		
	Female	61,869	55.5%	Male	<.001%

[Update for 2019 Submission; Risk Model Augmented from original submission]

At the clinic level*, the average OVC measure was 61.1%% (standard deviation = 10.5 %). The average number of patients reported by a clinic was 275. At the patient level**, the average OVC was 61.01 %. The average age in the examined population was 64.2 66.7% were male, 31.2 % had commercial insurance, 51.0 % had Medicare coverage, 6.7 % had Medicaid coverage and 1.5% had no insurance and 7.0% of patients had unverified insurance status.

* When evaluating rates and comparison among clinics, a clinic is only included in the analysis if they have > 30 eligible patients in the measurement period (calendar year).

** When evaluating the entire population (statewide), all eligible patients submitted for rate calculation are included even if their clinic's number of eligible patients was < 30.

Pearson Correlation Coefficient

Correlation between specific risk variable and overall result

Variable		Pearson
Gender		0.080
Patient Age		0.148
Insurance Product		
	Commercial	-0.008
	Medicare	0.061
	Medicaid	-0.100
	Uninsured	-0.031
Deprivation Index		0.058

(Socioeconomic ratio for patient zip code)

2b3.7. Statistical Risk Model Calibration Statistics (*e.g., Hosmer-Lemeshow statistic*):

[2016 Submission]

Test of selected variables

Analysis of Maximum Likelihood Estimates

Parameter	Comparison	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-0.8067	0.1727	21.8112	<0.0001

Medicare	Commercial	1	0.3539	0.02	313.1994	<.0001
MHCP	Commercial	1	0.7962	0.025	1010.692	<.0001
Uninsured	Commercial	1	-0.367	0.0265	192.1117	<.0001
18-25	51-65	1	0.1782	0.1703	1.0954	0.2953
26-50	51-65	1	-0.1394	0.0135	106.0312	<.0001
66-75	51-65	1	0.2527	0.00939	723.3905	<.0001

All results of both variables are significant except for ages less than 26 due to small sample size.

Test of correlation between variables, R square test

Estimated Correlation Matrix

Parameter	**Intercept**	**Medicare**	**MHCP**	**Uninsured**	**18-25**	**26-50**	**66-75**
Intercept	1	(0.046)	(0.050)	(0.128)	(0.986)	(0.074)	(0.064)
Medicare	-0.0458	1.000	0.336	(0.150)	0.002	(0.042)	**0.619**
MHCP	-0.0497	0.336	1.000	(0.115)	0.026	0.072	0.084
Uninsured	-0.1279	(0.150)	(0.115)	1.000	(0.006)	(0.035)	(0.029)
18-25	-0.9855	0.002	0.026	(0.006)	1.000	0.014	0.014
26-50	-0.0739	(0.042)	0.072	(0.035)	0.014	1.000	0.169
66-75	-0.0637	**0.619**	0.084	(0.029)	0.014	0.169	1.000

R-Square 0.0223, Max-rescaled R-Square 0.0315

The only two results that are correlated is being over 65 and being on Medicare, which makes logical sense.

[Update for 2019 Submission; Risk Model Augmented from original submission]

Logistic Regression Output results 2018 Dates of Service

OVC		Wald			Odds Ratio		
Variable	Estimate	Error	Chi Square		Point	95% CI	
Intercept	-1.9029	0.0427	1985.661	<.0001			
Age	0.0396	0.00716	3057.16	<.0001	1.04	1.039	1.0420
Medicare	-0.2369	0.0132	324.17	<.0001	0.789	0.769	0.8100
State Public Programs	-0.5654	0.018	982.18	<.0001	0.568	0.548	0.6700
Uninsured	-0.4779	0.0392	148.87	<.0001	1.031	0.99	1.0740
Deprivation Index	0.1050	0.00633	275.1	<.0001	1.111	1.097	1.125

Undetermined=patient insurance type could not be validated

2b3.8. Statistical Risk Model Calibration – Risk decile plots or calibration curves:

[2016 Submission]

Impact on Clinic Level Measurement Clinic Count

		With Risk Adjustment			
		Below	Expected	Above	Total
No Risk Adjustment	Below	65	30	0	84
	Average	0	297	1	298
	Above	0	25	59	95
		65	352	60	477
	Direction of Impact		2015 Impact		Previous Year
	Move to Expected	55	11.5%		13.5%
	Moved away from Expected	1	0.2%		0.2%
	Improved	31	6.5%		5.4%
	Worse	25	5.2%		8.3%
	Impacted	56	11.7%		13.8%

[Update for 2019 Submission; Risk Model Augmented from original submission]

Impact of Adding Socioeconomic Factors to Risk Adjustment, Clinic Count, 2018 Optimal Vascular Care

		Including SES Factor			
		Below Expected	Expected	Above Expected	Total
No SES	Below Expected	65	7		72
	Expected	2	428	9	439
	Above Expected		4	52	56
	Total	67	439	61	567
	Direction of Impact				
	Moved Toward Mean	11	1.9%		
	Moved away from Mean	11	1.9%		

	Improved Rating	16	2.8%		
	Decreased Rating	6	1.1%		
	Impacted	22	3.9%		

2b3.9. Results of Risk Stratification Analysis:

[2016 Submission]

Risk Segmentation Analysis

Optimal Vascular Care 1/1/2014 – 12/31/2014

	Patients				
	Age of patient				
	18-25	26-50	51-65	66-75	Total
Insurance Type					
Commercial	15	3,905	25,599	3,771	33,290
Medicare	4	849	9,490	43,154	53,497
State Public Programs	19	1,574	5,255	1,710	8,558
Uninsured	2	290	986	261	1,539
Total	40	6,618	41,330	48,896	96,884
	Optimally Manage Patients				
Insurance Type					
Commercial	12	2,594	18,181	2,828	23,615
Medicare	2	401	5,772	32,074	38,249
State Public Programs	12	688	2,776	1,081	4,557
Uninsured	1	135	533	169	838
Total	27	3,818	27,262	36,152	67,259
Commercial	80.0%	66.4%	71.0%	75.0%	70.9%
Medicare	50.0%	47.2%	60.8%	74.3%	71.5%
State Public Programs	63.2%	43.7%	52.8%	63.2%	53.2%
Uninsured	50.0%	46.6%	54.1%	64.8%	54.5%
	67.5%	57.7%	66.0%	73.9%	69.4%
t test compared to Medicare patient over 65 years old					
Commercial	0.44	<.01	<.01	0.26	0.20
Medicare	0.20	<.01	<.01	0.64	0.20

State Public Programs	0.20	<.01	<.01	<.01	0.32
Uninsured	0.32	<.01	<.01	<.01	<.01

[2016 Submission]

Conclusion: For patients under the age of 26, the sample size is too small to make any type of determination. For all ages over 25 and for all insurance products, there are significant differences between the categories.

[Update for 2019 Submission; Risk Model Augmented from original submission]

2018 Optimal Vascular Care – By Category

Insurance Type	**Patients**	**Rate**	**Comparison**	**T Score**
Commercial	57,989	60.5%	Medicare	<.001%
Medicare	94,867	64.0%		
Medicaid	19,035	41.3%	Medicare	
Uninsured	2,836	48.7%	Medicare	<.001%
Unknown	12,965	65.2%	Medicare	<.001%
Male	123,970	63.9%		
Female	61,869	55.5%	Male	<.001%

2b3.10. What is your interpretation of the results in terms of demonstrating adequacy of controlling for differences in patient characteristics (case mix)? (i.*e., what do the results mean and what are the norms for the test conducted*)

[2016 Submission]

Age and Insurance Product meet all requirements for Risk Variables; clinical concept, empirical association, variation across entries, not confounded with quality of care, resistant to manipulation, feasible and reliable collection and contribute to unique variation therefore are appropriate for risk adjustment.

[Update for 2019 Submission; Risk Model Augmented from original submission]

Insurance Product and Age continue to meet all requirements for Risk variables and the addition of ZIP Code level socioeconomic weighting with the deprivation index also meets all requirements for risk variables and has a significant impact on results.

2b3.11. Optional Additional Testing for Risk Adjustment (*not required, but would provide additional support of adequacy of risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods that were assessed*)

Not applicable

2b4. IDENTIFICATION OF STATISTICALLY SIGNIFICANT & MEANINGFUL DIFFERENCES IN PERFORMANCE

Note: *Applies to the composite performance measure.*

2b4.1. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified (*describe the steps—do not just name a method; what statistical analysis was used? Do not just repeat the information provided related to performance gap in 1b)*
[2016 Submission]

Methodology:

Identifying High Performing Medical Groups/Clinics

For each measure, both individual medical group rates and a medical group average rate were calculated. Medical groups that achieved high performance were identified by comparing the individual medical group/clinic rate with the statewide average. Medical groups that had rates and 95 percent confidence intervals that were fully above the statewide average were noted as high performers.

Additionally, the Top 5 performers are identified at the medical group level and Top 15 performers are identified at the clinic level.

TOP = Top 15 clinics or Top 5 medical groups, as long as the clinic or medical group meets the Above rating criteria. For measures that have less than 10 reportable medical groups, there is no TOP assignment.

ABOVE = Medical group/clinic rate and 95 percent confidence intervals are fully above the statewide average rate.

AVERAGE = Medical group/clinics with 95 percent confidence intervals that crosses the statewide average rate.

BELOW = Medical group/clinic rate and 95 percent confidence intervals are fully below the statewide average rate.

Identifying Medical Groups and Clinics with Biggest Improvements

For each measure, individual medical group and clinic rates during report year 2015 were compared with their rates during report year 2014, calculating an absolute percentage point difference. Medical groups and clinics with the largest percentage point increases were identified.

Medical Group and Clinic Performance Over Time (Three Years)

This analysis was done to determine patterns of medical group and clinic performance over time per measure. Patterns were reviewed for the three reporting years (2013, 2014 and 2015).

The percent and number of medical groups were reported for each of the following patterns of rate changes over the past three years for each measure:

• Consistently improved: Medical groups with more than a two percentage point increase between each consecutive year.

• Relatively stable: Medical groups that had no more than a two percentage point increase or decrease between each consecutive year (-2 percent – +2 percent).

• Consistently decreased: Medical groups with more than a two percentage point decrease between each consecutive year.

• Variable performance (with an improvement or with a decline): Medical groups with an up/down pattern that was not consistent and did not fall into one of the other categories.

7.2.4.1. Confidence intervals

Confidence intervals using the method of Agresti and Coull

The Wilson method for calculating confidence intervals for proportions (introduced by Wilson (1927), recommended by Brown, Cai and DasGupta (2001) and Agresti and Coull (1998)) is based on inverting the hypothesis test given in Section 7.2.4. That is, solve for the two values of p_0 (say, p_{upper} and p_{lower}) that result from setting $z = z_{1-\alpha/2}$ and solving for $p_0 = p_{upper}$, and then setting $z = z_{\alpha/2}$ and solving for $p_0 = p_{lower}$. (Here, as in Section 7.2.4, $z_{\alpha/2}$ denotes the variate value from the standard normal distribution such that the area to the left of the value is $\alpha/2$.) Although solving for the two values of p_0 might sound complicated, the appropriate expressions can be obtained by straightforward but slightly tedious algebra. Such algebraic manipulation isn't necessary, however, as the appropriate expressions are given in various sources. Specifically, we have

Formulas for the confidence intervals

$$\text{U.L.} = \frac{\hat{p} + \frac{z^2_{1-\alpha/2}}{2n} + z_{1-\alpha/2}\sqrt{\frac{\hat{p}(1-\hat{p})}{n} + \frac{z^2_{1-\alpha/2}}{4n^2}}}{1 + \frac{z^2_{1-\alpha/2}}{n}}$$

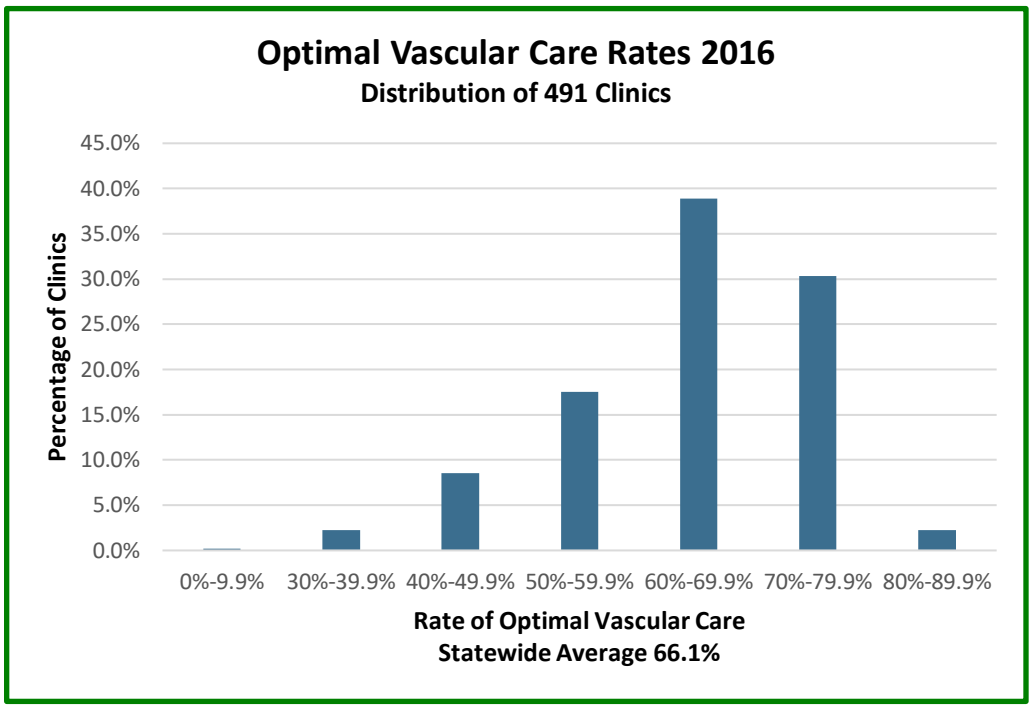
$$\text{L.L.} = \frac{\hat{p} + \frac{z^2_{\alpha/2}}{2n} + z_{\alpha/2}\sqrt{\frac{\hat{p}(1-\hat{p})}{n} + \frac{z^2_{\alpha/2}}{4n^2}}}{1 + \frac{z^2_{\alpha/2}}{n}}.$$

The Wilson method for calculating confidence intervals for all clinic rates and statewide rates.

www.itl.nist.gov/div898/handbook/prc/section2/prc241.htm

[No methodology changes since 2016 endorsement]

2b4.2. What were the statistical results from testing the ability to identify statistically significant and/or clinically/practically meaningful differences in performance measure scores across measured entities? (e.g., *number and percentage of entities with scores that were statistically significantly different from mean or some benchmark, different from expected; how was meaningful difference defined*)
[2016 Submission]

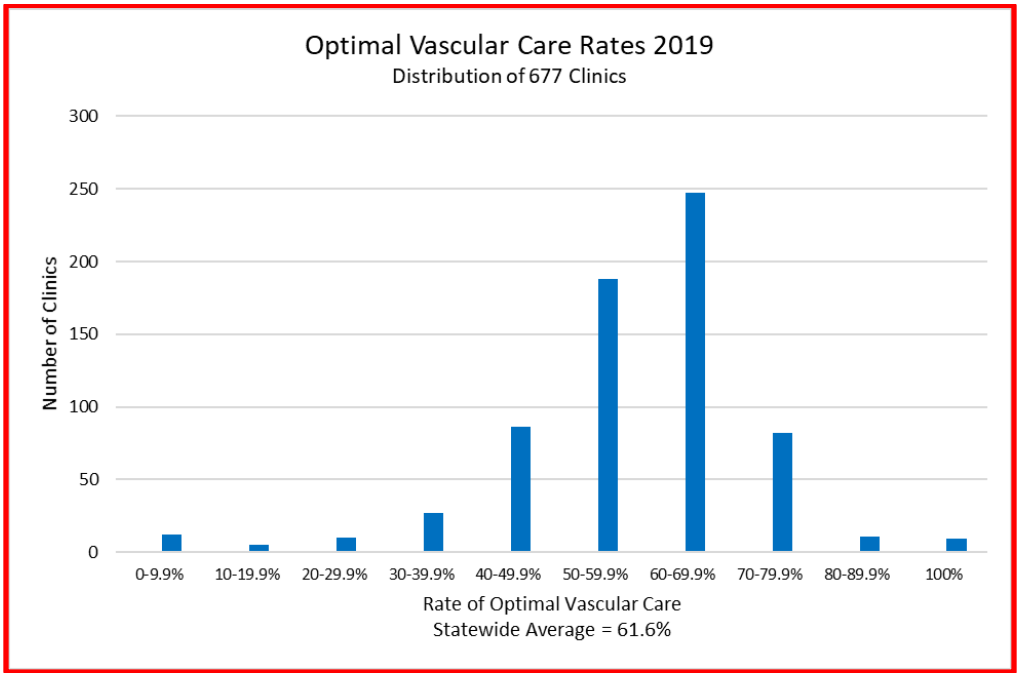


Statewide Rate for Optimal Vascular Care
Statewide Average: 69.3%
95% CI: 69.0%-69.6%
Numerator: 71,196
Denominator: 102,654

Total Eligible: 103,006

MHCP Rate for Optimal Vascular Care (2015)
MHCP Rate: 58.3%
MHCP CI (U/L): 57.3%-59.3%
MHCP Denominator (Patients Sampled): 10,152
Other Purchaser Rate: 72.2%
Difference (Other-MHCP): 13.9%

[2019 Update of Distribution of Rates]



Example of 2019 Comparative Report Publicly Reported
https://mncm.org/mncm-quality-report-2019-appendix-tables-chronic.pdf

Optimal Vascular Care

Optimal Vascular Care					
MEDICAL GROUP	**Performance**	**Patients**	**Actual Rate**	**Expected Rate**	**Actual / Expected Ratio**
Advanced Medical Clinic	●	53	39.62%	47.14%	0.84
Affiliated Community Medical Centers	●	1,960	61.84%	61.96%	1.00
Alomere Health	▼	766	59.92%	63.57%	0.94
Allina Health	▼	35,907	61.71%	62.31%	0.99
Altru Health System	▲	4,925	63.15%	61.68%	1.02
Amery Hospital and Clinic	●	550	61.64%	62.32%	0.99
Apple Valley Medical Clinic	●	546	65.02%	64.59%	1.01
Avera Medical Group	●	722	58.73%	59.51%	0.99
Burnsville Family Physicians	●	164	60.98%	65.00%	0.94
Catalyst Medical Clinic	●	60	65.00%	63.37%	1.03
Cedar Riverside People's Center	▼	90	33.33%	48.22%	0.69
CentraCare Health	●	5,377	60.80%	61.77%	0.98
Community University Health Care Center	▼	69	33.33%	48.42%	0.69
Cromwell Medical Clinic PLLC - IHN	▲	41	70.73%	64.26%	1.10
Cuyuna Regional Medical Center	▼	913	49.95%	60.97%	0.82
Dawson Clinic	●	93	62.37%	61.11%	1.02
Duluth Family Medicine Clinic (Formerly Duluth Family Practice Center)	▼	132	35.61%	47.34%	0.75
Edina Sports Health & Wellness	●	104	55.77%	65.32%	0.85
Entira Family Clinics (formerly Family Health Services MN)	▲	2,741	73.18%	62.96%	1.16
Essentia Health	▲	13,871	61.86%	60.34%	1.03

TABLE 3: High Performers in 2018 – Primary Care/Multi-Specialty Care Medical Groups

	QUALITY MEASURE	Allina Health (15 of 23)	Entira Family Clinics (13 of 21)	Essentia Health (16 of 23)	Health-Partners Clinics (19 of 23)	Mankato Clinic (15 of 23)	Mayo Clinic (11 of 22)	Park Nicollet Health Services (21 of 23)	Stillwater Medical Group (7 of 14)
PREVENTIVE HEALTH	Breast Cancer Screening	•		•	•	•	•	•	^
	Cervical Cancer Screening	•			•			•	^
	Colorectal Cancer Screening	•		•	•	•	•	•	
	Chlamydia Screening	•	•		•			•	^
	Childhood Immunization Status (Combo 10)	•				•		•	^
	Adolescent Immunization (Combo 2)						•		^
CHRONIC CONDITIONS	Optimal Diabetes Care	•	•	•	•			•	
	Diabetes Eye Exam	•	^	•	•			•	^
	Optimal Vascular Care		•	•	•			•	
	Controlling High Blood Pressure	•	•	•		•		•	^
	Optimal Asthma Control – Adults	•	•	•	•	•		•	•
	Optimal Asthma Control – Children	•	•	•	•	•		•	•
	Use of Spirometry Testing in the Assessment and Diagnosis of COPD				•	•	•	•	^

2b4.3. What is your interpretation of the results in terms of demonstrating the ability to identify statistically significant and/or clinically/practically meaningful differences in performance across measured entities?

(i.*e., what do the results mean in terms of statistical and meaningful differences?*)
[2016 Submission]

Measure identifies both opportunity for improvement in outcomes and processes to reduce risk of long term complications for patients with ischemic vascular disease and identifies meaningful differences among providers.

[2019 No changes to the interpretation]

2b5. COMPARABILITY OF PERFORMANCE SCORES WHEN MORE THAN ONE SET OF SPECIFICATIONS

Note: *Applies to all component measures, unless already endorsed or are being submitted for individual endorsement.*

If only one set of specifications, this section can be skipped.

Only one set of specifications used.

Note*: This item is directed to measures that are risk-adjusted (with or without social risk factors)* ***OR*** *to measures with more than one set of specifications/instructions (e.g., one set of specifications for how to identify and compute the measure from medical record abstraction and a different set of specifications for claims or eMeasures). It does not apply to measures that use more than one source of data in one set of specifications/instructions (e.g., claims data to identify the denominator and medical record abstraction for the numerator).* ***Comparability is not required when comparing performance scores with and without social risk factors in the risk adjustment model. However, if comparability is not demonstrated for measures with more than one set of specifications/instructions, the different specifications (e.g., for medical records vs. claims) should be submitted as separate measures.***

2b5.1. Describe the method of testing conducted to compare performance scores for the same entities across the different data sources/specifications (*describe the steps—do not just name a method; what statistical analysis was used*)

2b5.2. What were the statistical results from testing comparability of performance scores for the same entities when using different data sources/specifications? (*e.g., correlation, rank order*)

2b5.3. What is your interpretation of the results in terms of the differences in performance measure scores for the same entities across the different data sources/specifications? (i.*e., what do the results mean and what are the norms for the test conducted?*)

2b6. MISSING DATA ANALYSIS AND MINIMIZING BIAS

Note: *Applies to the overall composite measure.*

2b6.1. Describe the method of testing conducted to identify the extent and distribution of missing data (or nonresponse) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and nonresponders) and how the specified handling of missing data minimizes bias (*describe the steps—do not just name a method; what statistical analysis was used*)
[2016 Submission]

For this patient level all-or-none composite measure, elements missing from any component (e.g. visit but no blood pressure during the measurement year) are counted as a numerator component fail and therefore the patient would be accounted for and remain in the denominator.

[No numerator changes since 2016 endorsement]

2b6.2. What is the overall frequency of missing data, the distribution of missing data across providers, and the results from testing related to missing data? (*e.g., results of sensitivity analysis of the effect of various rules for missing data/nonresponse; if no empirical sensitivity analysis, identify the approaches for handling missing data that were considered and pros and cons of each*)
[2016 Submission]

The impact of missing data on measure calculations is minimal. For 2013 dates of service on over 104,395 ischemic vascular patients submitted for rate calculation two variables were considered 1) with in the appropriate measurement timeframe and 2) valid values submitted:

Variable	Within measure period	Invalid values
Blood Pressure	99.8%	0.03%
Tobacco Status documented	99.4%	0.0%
Aspirin or anti-platelets *	96.7%	
Statin **	94.3%	

* had documented aspirin or anti-platelet in the measurement year or the date of a valid contraindication

** had documented statin in the measurement year or the date of a valid contraindication

[No numerator changes since 2016 endorsement]

2b6.3. What is your interpretation of the results in terms of demonstrating that performance results are not biased due to systematic missing data (or differences between responders and nonresponders) and how the specified handling of missing data minimizes bias**?** (i.*e., what do the results mean in terms of supporting the selected approach for missing data and what are the norms for the test conducted; if no empirical analysis, provide rationale for the selected approach for missing data*)

[2016 Submission]

The impact of missing data on measure calculations is minimal. Patients with missing data are not excluded from the measure. Elements missing from any component are counted as a numerator component fail and remain in the denominator.

[No changes to interpretation since 2016 endorsement]

2c. EMPIRICAL ANALYSIS TO SUPPORT COMPOSITE CONSTRUCTION APPROACH

Note: *If empirical analyses do not provide adequate results—or are not conducted—justification must be provided and accepted in order to meet the must-pass criterion of Scientific Acceptability of Measure Properties. Each of the following questions has instructions if there is no empirical analysis.*

2d1. Empirical analysis demonstrating that the component measures fit the quality construct, add value to the overall composite, and achieve the object of parsimony to the extent possible.

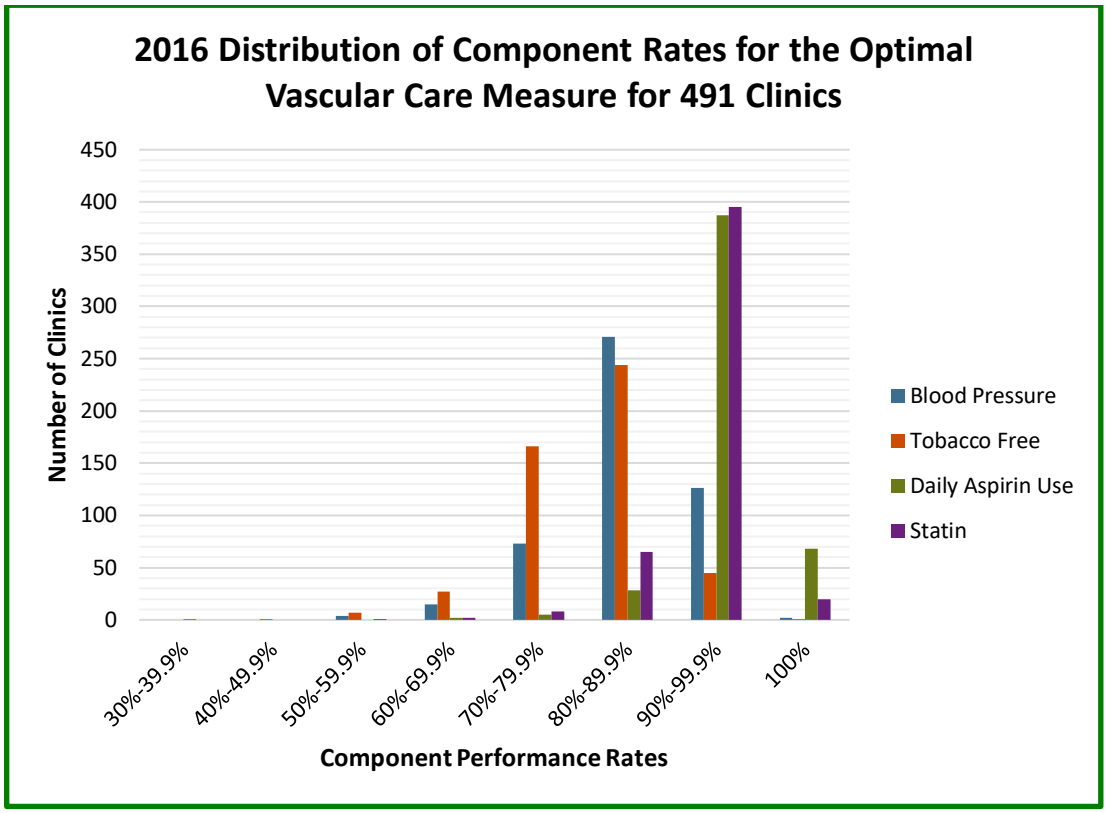
[2016 Submission]

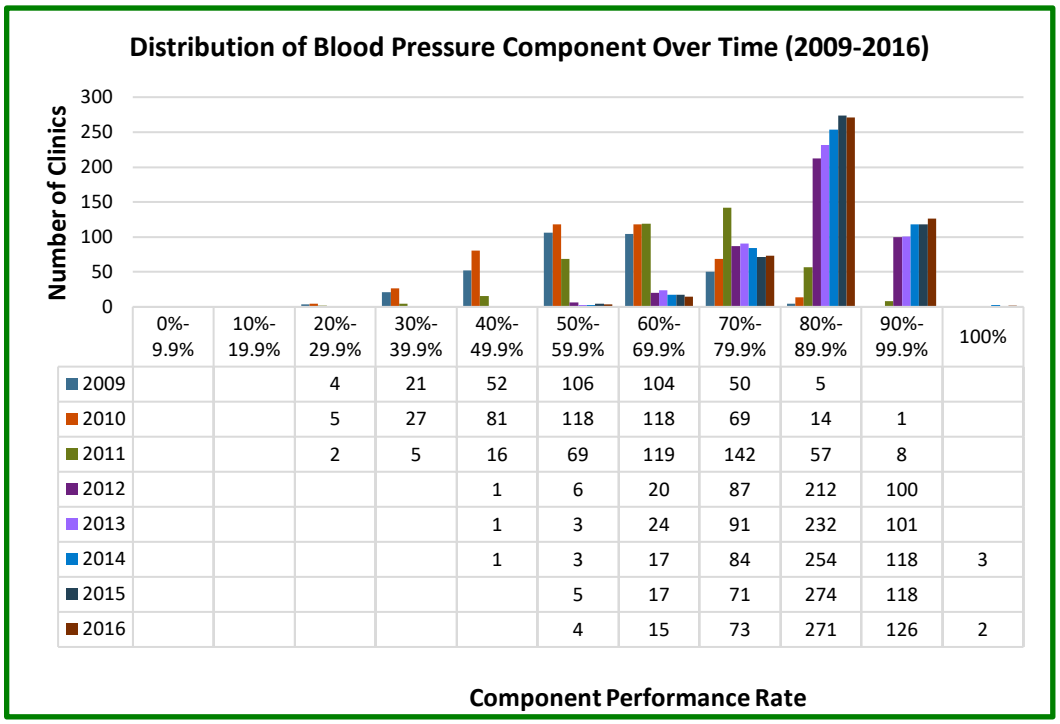
This composite measure is a patient level all-or-none composite in which the desired goal is for the patient is to achieve multiple intermediate physiological clinical outcome and medication use targets to best reduce their overall risk of developing long term complications or additional cardiovascular events. Reducing modifiable risks was the reason why this measure was developed. The components of this measure include blood pressure control, being tobacco-free, appropriate use of statins and daily aspirin or anti-platelet.

Achieving the intermediate physiological outcome targets related to blood pressure, being tobacco free and use of daily aspirin and statins where appropriate are the ischemic vascular disease patient's best mechanisms of avoiding or postponing long term complications associated with this chronic condition which affects millions of Americans. Measuring providers separately on individual targets is not as patient centric as a measure that seeks to reduce multiple risk factors for each patient. Patients are more likely to reduce their overall risk and maximize health outcomes by achieving several intermediate physiological targets.

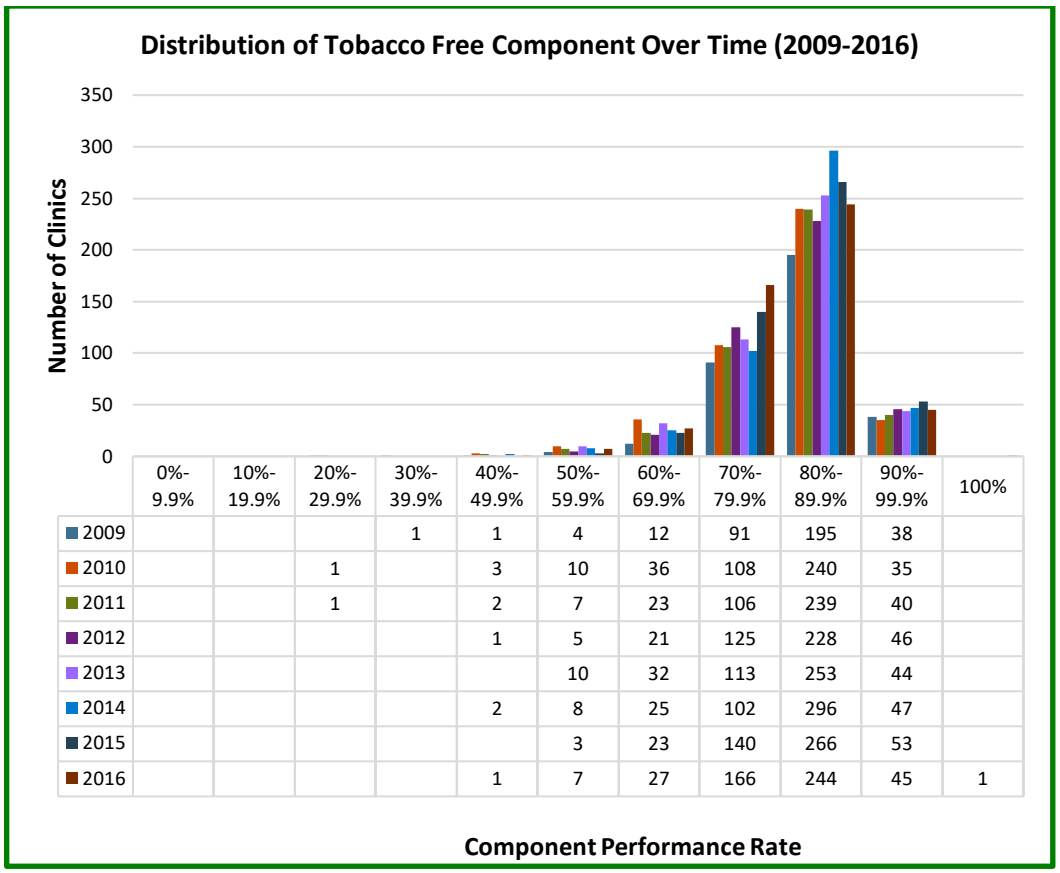
The components of this patient level all-or-none composite measure, though they can be analyzed as individual components especially for purposes of understanding opportunities within the composite measure, are treated as a whole. There is no weighting of the components; it is an all-or-none measure.

This graph demonstrates how clinics are performing for each component of the measure:

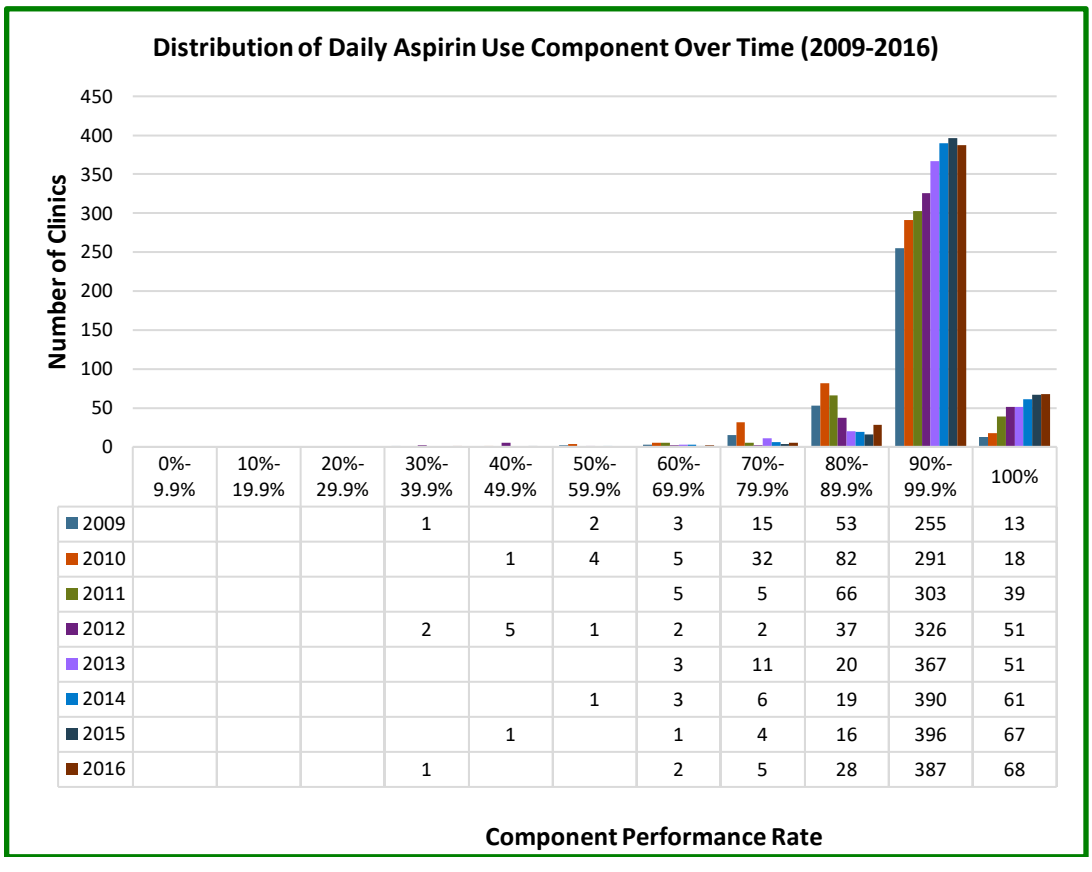




	0%-9.9%	10%-19.9%	20%-29.9%	30%-39.9%	40%-49.9%	50%-59.9%	60%-69.9%	70%-79.9%	80%-89.9%	90%-99.9%	100%
2009			4	21	52	106	104	50	5		
2010			5	27	81	118	118	69	14	1	
2011			2	5	16	69	119	142	57	8	
2012					1	6	20	87	212	100	
2013					1	3	24	91	232	101	
2014					1	3	17	84	254	118	3
2015						5	17	71	274	118	
2016						4	15	73	271	126	2



	0%-9.9%	10%-19.9%	20%-29.9%	30%-39.9%	40%-49.9%	50%-59.9%	60%-69.9%	70%-79.9%	80%-89.9%	90%-99.9%	100%
2009				1	1	4	12	91	195	38	
2010			1		3	10	36	108	240	35	
2011			1		2	7	23	106	239	40	
2012					1	5	21	125	228	46	
2013						10	32	113	253	44	
2014					2	8	25	102	296	47	
2015						3	23	140	266	53	
2016					1	7	27	166	244	45	1



	0%-9.9%	10%-19.9%	20%-29.9%	30%-39.9%	40%-49.9%	50%-59.9%	60%-69.9%	70%-79.9%	80%-89.9%	90%-99.9%	100%
2009				1		2	3	15	53	255	13
2010					1	4	5	32	82	291	18
2011							5	5	66	303	39
2012				2	5	1	2	2	37	326	51
2013							3	11	20	367	51
2014						1	3	6	19	390	61
2015					1		1	4	16	396	67
2016				1			2	5	28	387	68

Proportion of how many patients are meeting component targets (2016)

Category	# of Patients	Proportion
Daily Aspirin Use along	100,918	96.7%
Statin alone	98,653	94.5%
Blood Pressure alone	88,770	95.0%
Tobacco Free alone	86,680	83.0%
Daily Aspirin Use + Statin	96,137	92.1%
Blood Pressure + Daily Aspirin Use	86,037	82.4%
Blood Pressure + Statin	84,147	80.6%
Tobacco + Daily Aspirin Use	84,000	80.5%
Tobacco + Statin	82,091	78.6%
Blood Pressure + Tobacco	74,125	71.0%
Blood Pressure + Daily Aspirin Use + Statin	82,144	78.7%
Tobacco Free + Daily Aspirin Use + Statin	80,159	76.8%
Blood Pressure + Tobacco Free + Daily Aspirin Use	71,983	69.0%
Blood Pressure + Tobacco Free + Statin	70,418	67.4%
All 4 components (statewide average)	69,026	66.1%

[No numerator changes since 2016 endorsement]

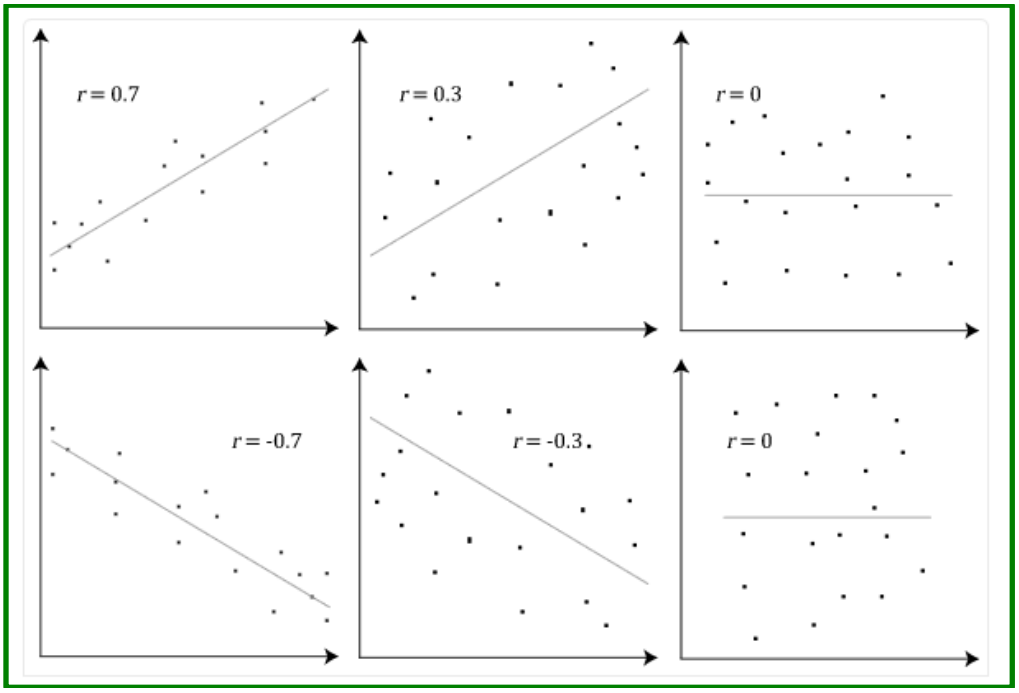
2d1.1 Describe the method used (*describe the steps—do not just name a method; what statistical analysis was used; if no empirical analysis, provide justification)*
https://statistics.laerd.com/statistical-guides/pearson-correlation-coefficient-statistical-guide.php

[2016 Submission]

The Pearson product-moment correlation coefficient (or Pearson correlation coefficient, for short) is a measure of the strength of a linear association between two variables and is denoted by *r*. Basically, a Pearson product-moment correlation attempts to draw a line of best fit through the data of two variables, and the Pearson correlation coefficient, *r*, indicates how far away all these data points are to this line of best fit (how well the data points fit this new model/line of best fit).

The Pearson correlation coefficient, r, can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association; that is, as the value of one variable increases, so does the value of the other variable. A value less than 0 indicates a negative association; that is, as the value of one variable increases, the value of the other variable decreases.

The stronger the association of the two variables, the closer the Pearson correlation coefficient, r, will be to either +1 or -1 depending on whether the relationship is positive or negative, respectively. Achieving a value of +1 or -1 means that all your data points are included on the line of best fit - there are no data points that show any variation away from this line. Values for r between +1 and -1 (for example, r = 0.8 or -0.4) indicate that there is variation around the line of best fit. The closer the value of r to 0 the greater the variation around the line of best fit. Different relationships and their correlation coefficients are shown in the diagram below:



[No changes to the composite or component structure since 2016 endorsement]

2d1.2. What were the statistical results obtained from the analysis of the components? (e.g., *correlations, contribution of each component to the composite score, etc.*; *<u>if no empirical analysis</u>, identify the components that were considered and the pros and cons of each*)

[2016 Submission]

Optimal Vascular Care and Blood Pressure

Correlation Analysis

The CORR Procedure

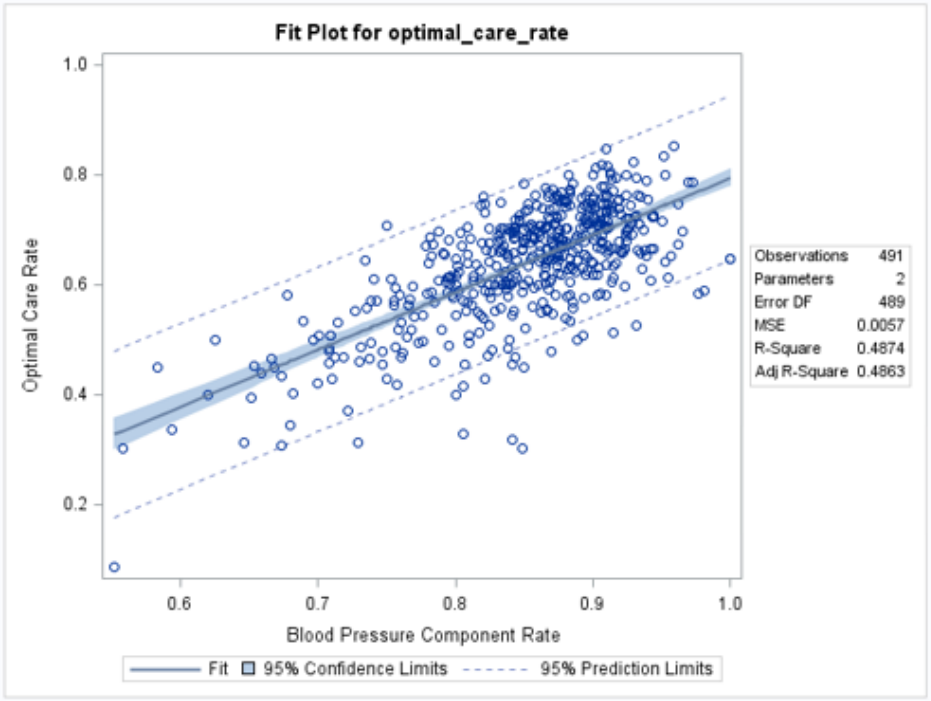
1 With Variables:	blood_pressure_component_rate
1 Variables:	optimal_care_rate

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
blood_pressure_component_rate	491	0.85048	0.07079	417.58775	0.55172	1.00000	Blood Pressure Component Rate
optimal_care_rate	491	0.63919	0.10564	313.84231	0.08621	0.85338	Optimal Care Rate

Pearson Correlation Coefficients, N = 491
Prob > |r| under H0: Rho=0

	optimal_care_rate
blood_pressure_component_rate	0.69813
Blood Pressure Component Rate	<.0001



Optimal Vascular Care and Tobacco Free

Correlation Analysis

The CORR Procedure

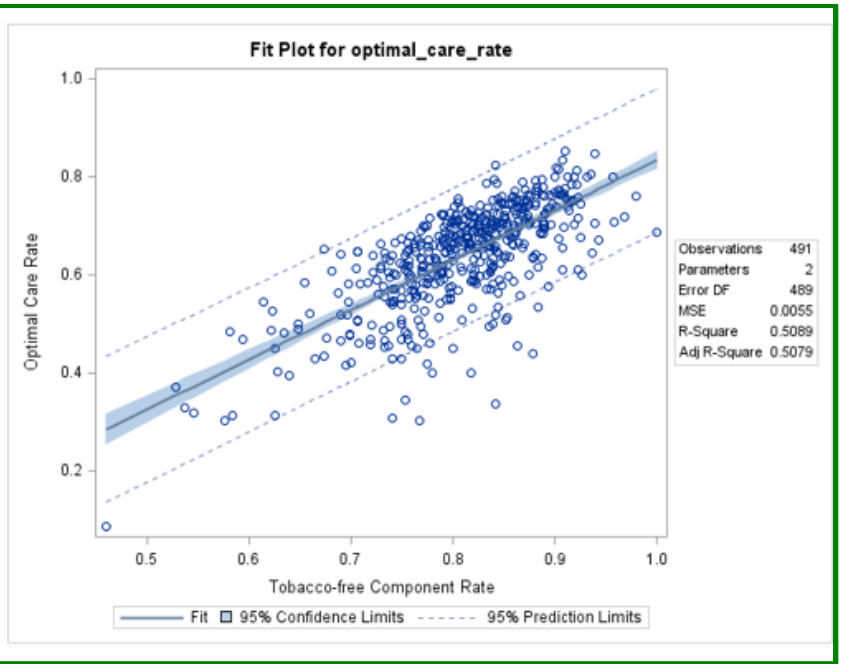
1 With Variables:	tobacco_free_component_rate
1 Variables:	optimal_care_rate

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
tobacco_free_component_rate	491	0.80901	0.07427	397.22177	0.45977	1.00000	Tobacco-free Component Rate
optimal_care_rate	491	0.63919	0.10564	313.84231	0.08621	0.85338	Optimal Care Rate

Pearson Correlation Coefficients, N = 491
Prob > |r| under H0: Rho=0

	optimal_care_rate
tobacco_free_component_rate	0.71336
Tobacco-free Component Rate	<.0001



Optimal Vascular Care and Daily Aspirin Use

Correlation Analysis

The CORR Procedure

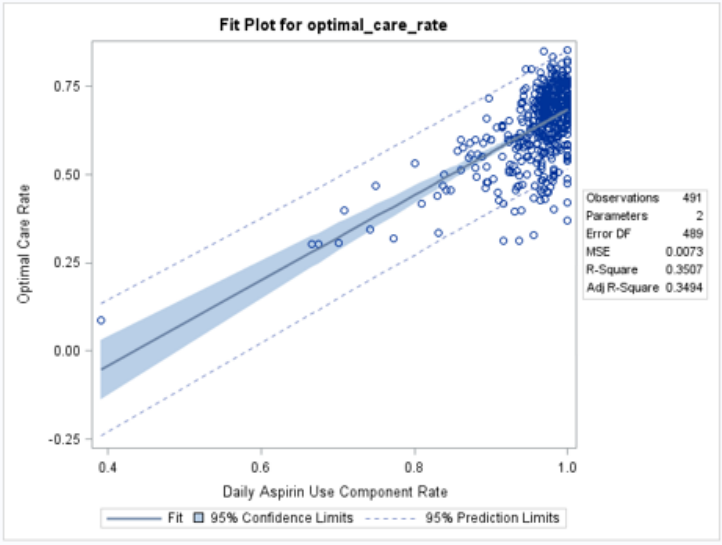
1 With Variables:	daily_aspirin_use_component_rate
1 Variables:	optimal_care_rate

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
daily_aspirin_use_component_rate	491	0.96271	0.05167	472.68933	0.39080	1.00000	Daily Aspirin Use Component Rate
optimal_care_rate	491	0.63919	0.10564	313.84231	0.08621	0.85338	Optimal Care Rate

Pearson Correlation Coefficients, N = 491
Prob > |r| under H0: Rho=0

	optimal_care_rate
daily_aspirin_use_component_rate	0.59223
Daily Aspirin Use Component Rate	<.0001



Optimal Vascular Care and Statin Use

Correlation Analysis

The CORR Procedure

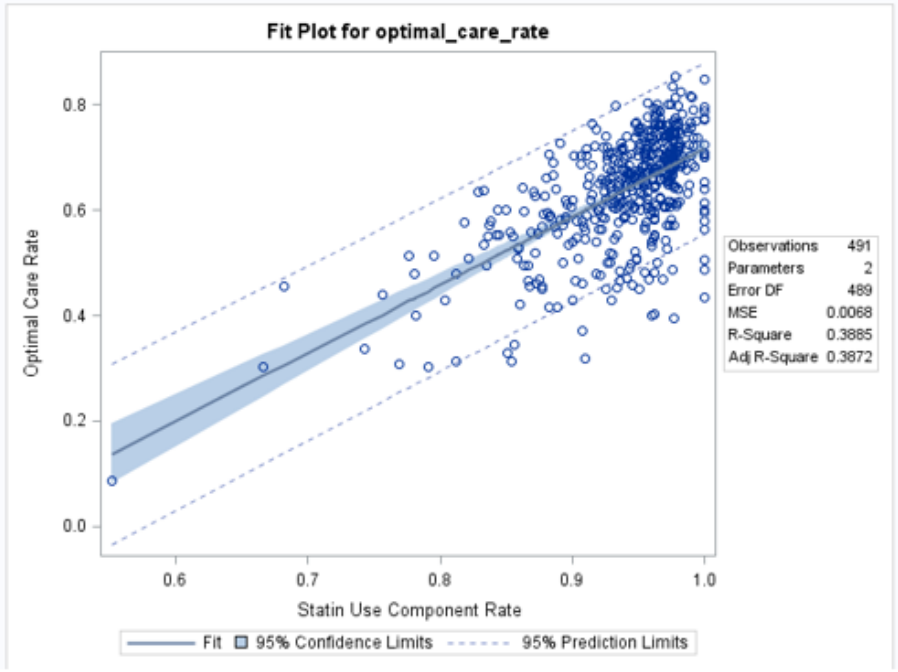
1 With Variables:	statin_use_component_rate
1 Variables:	optimal_care_rate

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
statin_use_component_rate	491	0.93973	0.05086	461.40755	0.55172	1.00000	Statin Use Component Rate
optimal_care_rate	491	0.63919	0.10564	313.84231	0.08621	0.85338	Optimal Care Rate

Pearson Correlation Coefficients, N = 491
Prob > |r| under H0: Rho=0

	optimal_care_rate
statin_use_component_rate	0.62327
Statin Use Component Rate	<.0001



[No changes to the composite or component structure since 2016 endorsement]

2d1.3. What is your interpretation of the results in terms of demonstrating that the components included in the composite are consistent with the described quality construct and add value to the overall composite? (i.*e., what do the results mean in terms of supporting inclusion of the components; if no empirical analysis, provide rationale for the components that were selected)*

[2016 Submission]

Practices in Minnesota demonstrate high compliance with and implementation of clinical guidelines for prescribing/ordering medications for patients with ischemic vascular disease that reduce their risk for future events or long term complications. 2009 to 2011 demonstrated more variability in the daily aspirin/ anti-platelet component, but as groups integrated this into their practices the component rates increased and held steady. Aspirin/ anti-platelet rates are not necessarily as high across the country. Paerkh A.K. et al cite rates as low as 34.8% in primary care settings. [Aspirin in the Secondary Prevention of Cardiovascular Disease, NEJM Jan 2013]. While all components demonstrate opportunity for improvement at a clinic level, blood pressure control and tobacco free components demonstrate more variability, opportunity for improvement and impact ability to achieve all four components.

Pearson Correlation Analysis

Components as compared to the composite Optimal Care Rate demonstrate a strong correlation with the following Pearson r coefficient values: Blood Pressure at 0.69813, Tobacco-free at 0.71336, Aspirin or Anti-platelet Use at 0.59223 and Statin Use at 0.62327.

[No changes to the composite or component structure since 2016 endorsement]

2d2. Empirical analysis demonstrating that the aggregations and weighting rules are consistent with the quality construct and achieve the objective of simplicity to the extent possible

Not applicable

2d2.1 Describe the method used (*describe the steps—do not just name a method; what statistical analysis was used; if no empirical analysis, provide justification)*
Not applicable

2d2.2. What were the statistical results obtained from the analysis of the aggregation and weighting rules? (e.g., *results of sensitivity analysis of effect of different aggregations and/or weighting rules; if no empirical analysis, identify the aggregation and weighting rules that were considered and the pros and cons of each*)
Not applicable

2d2.3. What is your interpretation of the results in terms of demonstrating the aggregation and weighting rules are consistent with the described quality construct? (i.*e., what do the results mean in terms of supporting the selected rules for aggregation and weighting; if no empirical analysis, provide rationale for the selected rules for aggregation and weighting*)
Not applicable

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (*i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields*)
Update this field for **maintenance of endorsement**.

ALL data elements are in defined fields in electronic health records (EHRs)

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than

electronic sources. For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

Building and currently pilot testing a centralized, state-wide electronic method of data capture that includes this measure. PIPE (Process Intelligence Performance Engine) simplifies the data collection process with automated file transfer and then the performance engine centrally applies all measure logic to identify denominator and numerator elements (e.g., blood pressure values, statin medication orders, etc.) to calculate measure rates. This significantly reduces data collection burden on medical groups and streamlines current process. MNCM's PIPE system is agnostic to EHR vendor and is not reliant on vendors to implement programming for measures within their complicated individualistic systems.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

This measure is collected and reported as part of state health reform legislation for a statewide quality reporting and measurement system. Physicians who care for patients with ischemic vascular disease (e.g., family medicine, internal medicine, and cardiology) are required to submit patient level data for rate calculation.

Periodically, MNCM surveys the medical groups about their participation in this process. In 2018, 65.3% of medical groups rated the level of difficulty in obtaining the data needed for patient level submission as "Easy" or "Very Easy" (66/101).

Over the last several years we have learned the following:

? Providing templates of data file submissions has proved to be efficient and increased data quality.

? Detailed, clear measure specifications and data element dictionaries with explicit definitions and instructions is key to obtaining accurate comparable information.

? Audit methods have further ensured the accuracy of the data.

? Confidentiality of sensitive patient information is protected by several mechanisms. MNCM only receives the patient level information needed to determine eligibility for inclusion in the measure, calculate and risk adjust the measure, and support the administration of pay for performance programs. The PHI submitted is minimal and the data is protected by 1) password protection with password only available to the medical group submitting data, 2) file upload process is encrypted as data is transferred and 3) data is stored on a separate secure server and meets all HIPAA protection rules.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified *(e.g., value/code set, risk model, programming code, algorithm)*.

There are no fees associated with participation and submitting data for this measure. Results are available to 1) all data submitters within the HIPAA secure MNCM data portal and 2) to the public on our consumer facing website MN Health Scores at www.mnhealthscores.org and 3) annual health care quality report on our corporate website at www.mncm.org. There are costs to the medical groups in terms of extract programs or abstraction to submit patient level clinical information for rate calculation.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)

	Public Reporting MN HealthScores http://www.mnhealthscores.org/ Health Care Quality Report http://mncmsecure.org/website/Reports/Community%20Reports/Health%20Care%20Quality%20Report/2019%20HCQR%20Chartbook%20FINAL.pdf Quality of Care for Chronic Conditions in Minnesota https://mncm.org/wp-content/uploads/2020/01/MNCM-Chronic-Care-Report-2018.pdf MN HealthScores http://www.mnhealthscores.org/ Health Care Quality Report http://mncmsecure.org/website/Reports/Community%20Reports/Health%20Care%20Quality%20Report/2019%20HCQR%20Chartbook%20FINAL.pdf Quality of Care for Chronic Conditions in Minnesota https://mncm.org/wp-content/uploads/2020/01/MNCM-Chronic-Care-Report-2018.pdf Payment Program HealthPartners Partners in Quality Program https://www.healthpartners.com/provider-public/quality-and-measurement/partners-in-quality/ Regulatory and Accreditation Programs Minnesota Statewide Quality Reporting and Measurement System (SQRMS) http://www.health.state.mn.us/healthreform/measurement/index.html Minnesota Statewide Quality Reporting and Measurement System (SQRMS) http://www.health.state.mn.us/healthreform/measurement/index.html Professional Certification or Recognition Program MN Department of Health Health Care Homes Certification & Recertification https://www.health.state.mn.us/facilities/hchomes/certification/index.html Quality Improvement (external benchmarking to organizations) MN Department of Health Health Care Homes Performance Measurement and Evaluation https://www.health.state.mn.us/facilities/hchomes/outcomes/benchmarking.html

4a1.1 For each CURRENT use, checked above (update for <u>maintenance of endorsement</u>), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

a. Payment Program
HealthPartners Partners in Quality
Partners in Quality Programs

The HealthPartners pay for performance program, Partners in Quality, considers the principles endorsed by the following national and local groups

- Minnesota Medical Association (MMA)
- Institute of Medicine (IOM)
- Medical Group Management Association
- Minnesota Community Measurement

The program´s goal is to drive improvements in healthcare quality within care delivery systems and maximize participation of all providers over time. The Partners in Quality program consists of: Partners in Excellence (PIE), Innovations in Health Care Award, and Preventive Care Recognition Award. Financial rewards are based on medical, specialty or pharmacy group performance as measured by Minnesota Community Measurement. For those measures that do not have a corresponding MNCM measures, we utilize HealthPartners Clinical Indicator measurement set, and HealthPartners Consumer Choice Satisfaction survey.

b. Professional Certification or Recognition Program

MN Department of Health

Health Care Homes- Certification & Recertification

HCH Certification is a free and voluntary program provided to primary care clinics and organizations by the Minnesota Department of Health.

HCH Certification assures that the team based care delivery approach is a partnership with primary care providers, families and patients with the overarching goals of improving the quality, experience, and value of care.

Certification and Recertification is the online documentation process that is validated through a site visit/team meeting to assure transformation and implementation of the HCH standards.

d. Public Reporting

MN Community Measurement- MN HealthScores Website

Public Reporting consumer-facing website

All primary care, multi-specialty clinics with cardiology services and cardiology clinics in Minnesota (mandatory) and bordering communities (voluntary)

92 Medical groups representing 564 clinic sites; 2018 dates of service 185,840 patients with ischemic vascular disease.

MNCM Health Care Quality, Equity and Disparity Annual Reports

Public Reporting: Hard-copy reports (pdf) highlighting top performers, most improved

92 Medical groups representing 564 clinic sites; 2018 dates of service 185,840 patients with ischemic vascular disease.

Quality of Care for Chronic Conditions in Minnesota

Public Reporting: Hard-copy reports (pdf) highlighting the quality of care provided for chronic diseases including ischemic vascular disease

e. Quality Improvement (external benchmarking to organizations)

Health Care Homes Performance Measurement and Evaluation

Benchmarking

Minnesota Community Measurement (MNCM) and the Minnesota Department of Health (MDH) collaborate to present information about benchmarking criteria for the Health Care Homes certification process.

Use the statewide average and the HCH average to create a range of low, medium-low, medium-high, and high performance goals. Tested using ranges with the Optimal Vascular Care, Optimal Diabetes Care, Optimal Asthma Care, and Depression Screening 6-month remission measures to make sure that established ranges would be consistent throughout each measure.

g. Regulatory and Accreditation Programs

Minnesota Department of Health

Minnesota Statewide Quality Reporting and Measurement System (SQRMS)

Health Care Quality Measures

As part of Minnesota's 2008 health reform law initiative, the Commissioner of Health is required to establish a standardized set of quality measures for health care providers across the state. The goal is to create a uniform approach to quality measurement to enhance market transparency and drive health care quality improvement through an evolving measurement and reporting strategy. This standardized quality measure set is called the Minnesota Statewide Quality Reporting and Measurement System. Physician clinics and hospitals have been reporting quality measures under the statewide system since 2010. Health plans may use the standardized measures and may not require providers to undertake reporting on measures outside of the system.
The Minnesota Department of Health conducts an Annual Quality Rule Update, drawing on community feedback. Quality measures must be based on medical evidence and developed through a process in which health care providers participate. Additionally, the measures must:

- Include uniform definitions, measures, and forms for submission of data, to the extent possible;
- Seek to avoid increasing the administrative burden on health care providers; and
- Place a priority on measures of health care outcomes rather than processes where possible.

Based on this legislation, mandatory submission of data from Minnesota physician clinics that have provider specialties that are applicable to the measured population. For the Optimal Vascular Control Measure this includes family medicine, general practice, internal medicine, geriatric medicine and cardiology.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (*e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?*)

na

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (*Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting*.)

na

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

Performance results are provided to all medical groups who submit data for this state-wide measure via several options:

• Preliminary measure rates are provided immediately after file upload to HIPAA secure, password protected data portal

• A two-week review process is conducted to allow groups to review and potentially appeal prior to public reporting of rates

• Rates are reported by medical group and clinic level on public website MN Healthscores at www.mnhealthscores.org/

• Additionally, rates including all historical rates can be obtained from the MNCM data portal (pass-word protected)

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

Currently, data is collected once per year and results are provided on an annual basis. See question 4a2.1.1. for the process and list of multiple mechanisms for receiving results and providing feedback.

MNCM provides recorded webinars for each measure or measure set that provides education for measure specification (denominator, numerator, exclusions) measure calculation and understanding results.

Education and explanation are also included in our hard copy reports. The annual Health Care Quality Report provides descriptive information along with the results for each measure plus appendices for guidelines for comparing measures over time, data sources and data collection, and methodology (attribution, weighting, rate calculation, risk adjustment).
http://mncmsecure.org/website/Reports/Community%20Reports/Health%20Care%20Quality%20Report/2019%20HCQR%20Chartbook%20FINAL.pdf

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

MNCM's Measure Review Committee (MRC) is tasked with the annual review of all publicly reported measures on MN Healthscores. As part of this process, which includes evaluation against NQF criteria (importance, scientific acceptability, feasibility and use), each measure is assessed for appropriateness to continue reporting. MRC recommendations are reviewed by MNCM's multi-stakeholder Measurement and Reporting Committee and the slate of publicly reported measures is approved by the MNCM Board of Directors

http://mncmsecure.org/website/MARC/Slate%20of%20MNCM%20Measures%20for%202020%20Reporting_FINAL%20Board%20Approved.pdf

For the Optimal Vascular Care measure review in 2019 Committee ratings were as follows:

On a four-point scale (1 = insufficient, 2 = low, 3 = moderate and 4 = high)

Performance gap average 3.88

Impact of the measure and level of effort (burden) was assessed on a 10-point scale

Does this measure help move the quality of care needle forward and improve health outcomes?

0 = no impact; 10 = extremely high impact

Committee impact rating was 8.88

How much time, effort and resources are needed for data collection, reporting and improving performance?

0 = no effort; 10 = extremely high effort

Committee effort rating was 5.0

The MRC voted unanimously to continue the measure without changes.

In May of 2018, MNCM's Measurement and Reporting Committee reviewed the BP Redesign Workgroup's rationale and recommendations for no change to the blood pressure target of < 140/90 and voted unanimously to accept the recommendation as presented.

The Optimal Vascular Care measure was on the 2017 Measures Under Consideration list for CMS and in 2018 it was recommended for use by NQF Measures Application Partnership (MAP) Clinician and MAP Rural Health Workgroups. Ultimately, the measure was not accepted into the quality payment program.

4a2.2.2. Summarize the feedback obtained from those being measured.

The MN Department of Health conducts several comment periods during its annual rule making process, those being measured are invited to comment. Comments are reviewed by measure development staff to identify areas of concern for potential redesign.

MNCM provides a year-round staffed support through a helpline 612-746-4522 or email support@mncm.org.

During the measure development process, formal public comment is sought from the clinics and medical groups who will be measured. All comments are reviewed by the measure development workgroup for identifying any redesign or tweaks to the measure specifications prior to pilot testing the measure. Pilot testing provides an additional source for feedback from users; pilot participants are surveyed with questions around feasibility and data element ease or difficulty.

MNCM conducts an annual medical group survey which all clinics in the state are invited to participate and provide feedback. There are structured questions asking the users about measure value and burden.

2018 Medical Group Survey

Optimal Vascular Care Measure

To what degree does your medical group find value in the measure? (n = 110)

High Value 43.6% (48)

Moderate Value 35.5% (39)

Minimal Value 13.6% (15)

No Value 7.3% (8)

How easy or difficult is it to obtain the data needed for DDS submission for this measure? (n = 101)

Very Easy 20.8% (21)

Easy 44.6% (45)

Difficult 28.7% (29)

Very Difficult 5.9% (6)

4a2.2.3. Summarize the feedback obtained from other users

The Optimal Vascular Care measure was on the 2017 Measures Under Consideration list for CMS and in 2018 it was recommended for use by NQF Measures Application Partnership (MAP) Clinician and MAP Rural Health Workgroups.

Ultimately, the measure was not accepted into the quality payment program.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

This measure, originally developed by HealthPartners with stewardship transferred to MNCM in ~ 2008, has undergone two component re-design activities based on changes in evidence and guidelines. Each re-design has involved a multi-stakeholder measure development workgroup who use a consensus-based decision making process. To recap briefly:

• The cholesterol component was changed from LDL < 100 to appropriate statin use in 2015

• The blood pressure component has undergone some changes based on guidelines and alignment with other national measures until stabilizing at < 140/90 in 2010. Blood pressure component workgroup was convened in 2018 to review evidence and guideline change with the recommendation to remain at <140/90

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

Since the start of public reporting of this measure in 2007, there has been steady improvement in composite rates for achieving all targets; statewide average from 38.9% to 61.1% with continued demonstration of variability and opportunity for improvement.

According to United Health Foundation's Health Rankings website (https://www.americashealthrankings.org/), Minnesota scores very highly in national benchmark rankings for low rates of cardiovascular disease and related biomarkers and is ranked #1 for the fewest cardiovascular deaths per 100,000.

	I US	I MN	I Healthiest	I Least Healthy
Cardv. Deaths	I 260.4	I 193.8	I MN- 193.8	I Mississippi- 363.2 per 100,000
Heart Disease	I 4.2%	I 3.4%	I Utah- 2.4%	I W. Virginia- 8.3%
Heart Attack	I 4.5%	I 3.6%	I Utah- 2.8%	I W. Virginia- 8.6%
Stroke	I 3.4%	I 2.4%	I Colorado-2.0%	I Tennessee- 5.4%
High BP	I 32.2%	I 26.6%	I Utah- 24.5%	I W. Virginia- 43.5%
High Cholest	I 33.0%	I 29.0%	I Utah- 28.6%	I W. Virginia- 39.7%

Minnesota statistics have demonstrated age adjusted decreases in rates across several key cardiovascular indicators since 2003, and this in part can be attributed to all health care provider's attention on helping their patients reduce their modifiable risk factors.

	I 2003	I 2007	I 2017
Heart Disease Death	I 152.5	I 131.2	I 119.1
Stroke Death	I 47.1	I 36.2	I 32.6
Lower Ex. Amput. CV	I na	I 14.3	I 11.5

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

No unintended consequences identified during the testing, implementation and ongoing review of this measure.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

Although not unexpected, it has been beneficial to see the slow steady improvement on a statewide basis. It was important to move away from the historical "visit-counting" method that was originally used in this measure as a proxy for continuous enrollment criteria traditionally used in health plan measures and it was refreshing to see that with the appropriate increase in the denominator (that was previously artificial because patients truly did have ischemic vascular disease) that the numerator rates did not change significantly demonstrating patients were achieving optimal targets.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0067 : Coronary Artery Disease (CAD): Antiplatelet Therapy

0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet

0073 : Ischemic Vascular Disease (IVD): Blood Pressure Control

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

During the last maintenance cycle, there was a competing measure submitted by another measure steward, Ischemic Vascular Disease Care: All or None Outcome Measure-Optimal Control. This was an adaptation MNCM's measure of with four identical numerator components, different denominator definition and different exceptions based on a different data source. When identified as a directly competing all-or-none composite measure, it was withdrawn. However, this adaptation currently resides in CMS' quality payment program.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

No

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

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 was removed from the related list because although related, the measure's endorsement was removed in 2015.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

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.

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or

bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

Available at measure-specific web page URL identified in S.1 Attachment:

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): MN Community Measurement

Co.2 Point of Contact: Collette, Cole, cole@mncm.org, 612-454-4815-

Co.3 Measure Developer if different from Measure Steward: MN Community Measurement

Co.4 Point of Contact: Collette, Cole, cole@mncm.org, 612-454-4815-

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

#0076 Optimal Vascular Care was originally stewarded by HealthPartners and received its initial NQF endorsement in 2009. HealthPartners turned over the stewardship of the four component patient level all-or-none composite measure to MN Community Measurement (MNCM) in 2010.

In response to guideline changes over the year's MNCM's Measurement and Reporting Committee has authorized ad-hoc measure development groups to re-design or modify measure targets based on significant changes in the evidence and guidelines.

Blood pressure numerator targets were modified in 2010 using an expedited process following the Institute for Clinical Systems guideline publication to make changes to both the Optimal Diabetes Care and Optimal Vascular Care measures.

Original Workgroup included:

Beth Averbeck, MD HeathPartners

Rich Bergenstal, MD International Diabetes Center Park Nicollet

Barry Bershow, MD, Fairview Health Services

John Fredrick, MD Preferred One

Diane Mayberry, MN Community Measurement

Victor Montori, MD Mayo Clinic

Mark Nyman, MD Mayo Clinic

Gene Ollila, MD Allina Medical Clinic

Collette Pitzen, MN Community Measurement

Kari Retzer, ICSI Facilitator for Diabetes Guideline

JoAnn Sperl-Hillen, MD HealthPartners

Linda Walling, MD, HealthEast

In September 2013, MARC requested a diabetes measure development work group ad-hoc review of the cholesterol component based on ongoing comments received to consider modification of the LDL component

to “LDL < 100 or patient is on a statin”. As work group member recruitment proceeded, the advent of the long awaited updated guidelines necessitated a more extensive consideration for revision of the cholesterol/ lipid target component for both the Optimal Diabetes Care and Optimal Vascular Care measures

The measure development work group met to discuss the new guidelines and determine the future direction for the cholesterol/ lipid component of MNCM’s diabetes measure. After thoughtful consideration of new guidelines that focus on statin use and discourage targeting treatment to achieve certain cholesterol levels, the work group concluded that cholesterol management for the reduction of cardiovascular risk was too important to remove completely from the composite measure aimed at reducing modifiable risk factors. The group is proposing to move forward with a redesign of this component in a thoughtful, staged approach. After several meetings in 2014 and a thorough discussion of new guidelines, evidence, safety and patient preference, the workgroup completed the cholesterol component redesign which was reviewed and approved by the MNCM Measurement and Reporting Committee in October 2014.

Members of the measure development workgroup included:

Beth Averbeck, MD Chair Internal Med & MNCM Board,HealthPartners

Mark Nyman, MD Internal Med & MARC member,Mayo Clinic & Health System

Victor Montori, MD Endocrinology, Mayo Clinic

JoAnn Sperl-Hillen, MD Internal Med, HealthPartners

Courtney Baechler, MD Cardiologist, Allina Penny George Institute

Jonathon W. Godsall, MD Endocrinology, Allina Medical Group

Christopher Restad, DO Family Medicine, Health East

Rebecca Moxness, MD Endocrinology, Park Nicollet

Thomas Knickelbine, MD Cardiologist, Minneapolis Heart Institute

Woubeshet Ayenew, MD Cardiologist, Hennepin County Med Center

Terry Murray, RN Data Analyst, Allina Medical Group

Jeanine Rosner, RN QI, Park Nicollet

Monica Simmer Health Plan, Metropolitan Health Plan

Pam York State Agency, MDH/ SQRMS

Kris Soegaard Consumer/ Empl/ MARC Member, MN Health Action Group

Collette Pitzen Facilitator/ Measure Dev MNCM

Members of the 2014 Measurement and Reporting Committee Included:

Tim Hernandez, MD Co-Chair/ Family Medicine, Medium Metro Medical Group

Howard Epstein, MD Co-Chair/ Hospitalist, Health Plan (PreferredOne)

Bill Nersesian, MD Pediatrics, Large Metro Medical Group

Dan Walczak Health Economics/analytics, Health Plan (Ucare)

Larry Lee, MD Health Plan (Blue Cross Blue Shield MN)

Ann Robinow Consumer/Health Policy Consultant

David Satin, MDFamily Medicine/ Researcher, Large Metro Medical Group

Laura Saliterman, MD Pediatrics/Measurement/QI, Large Non-Metro Medical Group

Mark Nyman, MD Internal Medicine, Large Non-Metro Medical Group

Caryn McGeary Nursing/Measurement/QI, Small Non-Metro Clinics

Bruce Penner Nursing/Measurement/QI, Medium Non-Metro Medical Group

Rahshana Price-Isuk, MD Family Medicine/ Measurement/QI Safety Net Clinic

Chris Norton Consumer (Retired teacher)

Mark Sonneborn Hospital (MN Hospital Association)

Jeff Rank, MD Gastroenterology, Single Specialty Group

Darin Smith HEDIS Measurement/QI/Analyst, Health Plan (Medica)

Kris Soegaard Purchasers(Buyers Health Care Action Group)

Allan Ross, MD Family Medicine, Small Non-Metro Clinic

Matt Flory Consumer (American Cancer Society)

Robert Lloyd Purchaser, QI (MN Department of Human Services)

Sue Knudson Informatics, Measurement/QI(HealthPartners)

Stefan Gildemeister Health Policy, Data Analysis, QI(MN Department of Health)

David Homans, MD Cardiology, Large Metro Medical Group/Hospitals

Measure development workgroup was convened in April of 2018 to evaluate and discuss recent changes in guidelines and evidence surrounding blood pressure targets for patients with diabetes and vascular disease.

Name | Member Type | Organization

Beth Averbeck, MD | Internal Medicine; Chair | HealthPartners

Joseph Bianco, MD | Family Medicine & MARC | Essentia Health- Ely

Andrew Greenland, MD | Internal Medicine | Mayo Clinic

Christopher Fallert, MD | Family Medicine | University of Minnesota

Christian Anderson, MD | Family Medicine | Entira Family Clinics

Steven Bradley, MD MPH | Cardiology | Minneapolis Heart

David Homans, MD | Cardiology | Park Nicollet

Jesse Wheeler, MD | Nephrology & MARC | Park Nicollet

Nicole Paterson, PharmD | Pharmacist | Fairview Health Services

Karen Margolis, MD MPH | Data Analyst | HealthPartners

Cindy Ferrara, RN | Quality Improvement | Essentia Health- Duluth

Patrick Schultz, ACNS-BC | Clinic Administrator | Sanford

James Peacock, PhD MPH | State Agency | MN Dept. of Health

Cynthia Toher, MD | Health Plan/ Cardiology |Blue Cross/Blue Shield MN

David Klocke, MD | Health Plan/Hosp Med | Blue Cross/Blue Shield MN

Christine Norton | Consumer and MARC | Retired

Deb Krause | Employer | MN Health Action Group

Collette Pitzen | Facilitator/ Measure Dev | MNCM

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2002

Ad.3 Month and Year of most recent revision: 01, 2016

Ad.4 What is your frequency for review/update of this measure? Annual review

Ad.5 When is the next scheduled review/update for this measure? 10, 2020

Ad.6 Copyright statement:

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments:

[i] Risk Adjustment for Socioeconomic Status or Other Sociodemographic Factors; National Quality Forum, Aug 2014. NQF Website