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# Primary Care and Chronic Illness, Spring 2022 Cycle CDP Report

## TECHNICAL REPORT
## JANUARY 30, 2023

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# Contents

## Executive Summary

Primary care is a multidimensional framework that serves as the primary medical resource for patients to access equitable and affordable quality healthcare. Primary care encompasses health maintenance and promotion, disease prevention, counseling, patient education, and diagnosing and treating acute and chronic illnesses. The National Quality Forum's (NQF) Primary Care and Chronic Illness (PCCI) Standing Committee oversees a portfolio of quality measures that address primary care and the management of chronic disease, along with other disease processes that present the need for continuous quality care. The PCCI portfolio of measures includes endocrine disorders; eye, ear, nose, and throat conditions; infectious diseases; musculoskeletal conditions; and pulmonary conditions.

For this cycle, the Standing Committee evaluated one newly submitted measure and three measures undergoing maintenance review against NQF's standard evaluation criteria. The Standing Committee recommended all four measures for endorsement, and the Consensus Standards Approval Committee (CSAC) upheld the Standing Committee's recommendations.

The Standing Committee endorsed the following measures:

- NQF #0729 Optimal Diabetes Care (Minnesota Community Measurement)
- NQF #2797 Transcranial Doppler Ultrasonography Screening Among Children With Sickle Cell Anemia (University of Michigan)
- NQF #3294 STS Lobectomy for Lung Cancer Composite Score (Society of Thoracic Surgeons)
- NQF #3668 Follow-Up After Emergency Department Visits for Asthma (Albert Einstein College of Medicine/University of California, San Francisco)

Brief summaries of the measures and their evaluations are included in the body of the report; detailed summaries of the Standing Committee's discussion and ratings of the criteria for each measure are in Appendix A.

## Introduction

Accounting for 19.7 percent of the country's gross domestic product (GDP), healthcare expenditures reached $4.1 trillion in 2020, with a per capita expenditure of $12,530.[1] Healthcare costs are expected to grow at an average rate of 5.4 percent between 2019 and 2028, reaching $6.2 trillion by 2028.[1] Chronic diseases, broadly defined as conditions lasting a year or more and requiring continuous medical attention, are the leading causes of illness, disability, and death in the United States (U.S).[2] Chronic diseases, such as cancer, heart disease, and diabetes, account for most of the nation's $4.1 trillion healthcare expenditures.[3] As the point of contact for many seeking healthcare, primary care providers (PCPs) play a critical role in improving the health of populations and individuals.

Addressing improvements in primary care and chronic illness management is central to the mission of NQF. Through the Consensus Development Process (CDP), NQF's Primary Care and Chronic Care (PCCI) Standing Committee strives toward this mission by vetting and endorsing performance measures across various conditions and settings. Measures in the PCCI portfolio encompass topic areas such as endocrine disorders; eyes, ears, nose, and throat conditions; infectious diseases; musculoskeletal conditions; and pulmonary care.

Measures reviewed in this cycle focused on several clinical areas, including asthma care, specifically emergency department (ED) visits for children post discharge; Transcranial Doppler (TCD) ultrasonography screening among children with sickle cell anemia (SCA); diabetes care; and lung cancer operative mortality and complications.

### *Pediatric Asthma*

Asthma is a chronic lung condition in which the airways become inflamed and narrowed, thus making it difficult to breathe.[4] Approximately 1.8 million ED visits and 169,330 hospital stays in the U.S. were attributed to asthma in 2020.[5] A recent study estimated the 20-year direct costs of uncontrolled asthma from 2019 to 2038 to be $300.6 billion.[6] Given the prevalence of asthma, proper management is essential to improve the quality of life among persons with asthma and reduce the financial burden. In one study, follow-up visits after asthma-related ED visits were associated with a decrease in subsequent asthma-related ED visits.[7] The Standing Committee evaluated a measure this cycle that assessed follow-up after asthma-related ED visits for children with asthma following discharge from the ED (NQF #3668).

### *Pediatric Sickle Cell Anemia*

Sickle cell disease (SCD) refers to a group of inherited blood cell disorders in which abnormal hemoglobin causes red blood cells to take on the C-shape of a sickle as opposed to the normal round shape.[8] SCA, a subtype of SCD, presents the highest risk of morbidity and mortality and is also associated with an elevated risk of stroke among children with SCA.[9] TCD ultrasonography screening, an imaging test used to detect increased velocities in intracranial blood vessels, can be used to identify children with SCD who are at risk of stroke.[10] A physician may recommend blood transfusions when elevated blood velocity is detected in children with SCA.[8] The Standing Committee evaluated a measure this cycle that assessed the percentage of children ages 2 through 15 with SCA who received at least one TCD screening within a year (NQF #2797).

### *Diabetes Management*

Diabetes is a metabolic disorder in which beta cells of the pancreas either do not produce insulin or produce insufficient insulin, or the target tissues fail to utilize it properly.[11] Approximately 26.9 million people in the U.S. were diagnosed with diabetes in 2018.[12] In 2017, the estimated cost of diagnosed diabetes was $327 billion.[12] Knowing one's diabetes diagnosis is crucial to effectively managing the chronic nature of diabetes. Tobacco use, being overweight and/or obese, physical inactivity, elevated hemoglobin A1C (HbA1C) levels, high blood pressure, and high cholesterol are all risk factors for diabetes.[12] Optimal diabetes management requires mechanisms for avoiding or postponing diabetes-related complications, such as heart disease, chronic kidney disease, and eye disease. The Standing Committee evaluated a measure this cycle aimed at achieving the intermediate physiological outcome targets related to blood pressure and glycemic control, being tobacco free, and the use of daily aspirin and statins where appropriate (NQF #0729).

### *Lobectomy Lung Surgery*

Lung cancer, a cancer that originates in the lungs, remains the leading cause of cancer-related deaths in the U.S., with an estimated 130,180 deaths reported in 2022.[13,14] Lung cancer can be detected early through low dose computed tomography (CT) screenings, potentially reducing death rates by as much as 20 percent.[15] Surgery, chemotherapy, radiation therapy, targeted therapy, and combinations of these treatments can be used to treat lung cancer depending on the type and stage.[16] Lung cancer surgical procedures include lobectomy, segmentectomy, wedge resection, and pneumonectomy, with lobectomy being the most common.[17] The Standing Committee evaluated a measure this cycle that assessed the operative mortality and presence of at least one of nine major complications associated with lung cancer resection surgery, including lobectomy (NQF #3294).

## NQF Portfolio of Performance Measures for Conditions

The PCCI Standing Committee (Appendix C) oversees NQF's portfolio of PCCI measures (Appendix B), which includes measures on ear, nose, throat, and eye care; endocrinology; infectious disease; musculoskeletal care; and pulmonology. This portfolio contains 62 measures: 48 process measures, seven outcome measures, one patient-reported outcome performance measure (PRO-PM), four intermediate clinical outcome measures, and two composite measures.

Other measures related to PCCI have been assigned to other portfolios. These include functional status measures (Patient Experience and Function), opioid use measures (Patient Safety, Behavioral Health and Substance Use), diabetes-related admission rate measures (Prevention and Population Health), and a variety of condition- or population-specific measures (Surgery, Cardiovascular, Geriatrics and Palliative Care, etc.).

## Primary Care and Chronic Illness Measure Evaluation

On June 23, 2022, the PCCI Standing Committee evaluated one new measure and three measures undergoing maintenance review against NQF's standard measure evaluation criteria.

**Table 1. Primary Care and Chronic Illness Measure Evaluation Summary**

| Measure | Maintenance | New | Total |
|---|---|---|---|
| **Measures under review for endorsement** | 3 | 1 | 4 |
| **Measures endorsed** | 3 | 1 | 4 |

## Comments Received Prior to Standing Committee Evaluation

NQF accepts comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments for a continuous period during each evaluation cycle via an online tool located on the project webpage. For this evaluation cycle, the commenting period opened on May 6, 2022, and pre-meeting commenting closed on June 7, 2022. No comments were received prior to the measure evaluation meeting (Appendix F).

## Comments Received After Standing Committee Evaluation

The continuous public commenting period with NQF member support closed on September 6, 2022. Following the Standing Committee's evaluation of the measures under review, NQF received one comment from one organization, which is an NQF member organization, pertaining to the measures under review (Appendix G). All comments for each measure under review have also been summarized in Appendix A.

NQF members had the opportunity to express their support ("support" or "do not support") for each measure submitted for endorsement consideration to inform the Standing Committee's recommendations during the commenting period. No NQF members expressed "support" or "do not support" for the measures under review.

## Summary of Measure Evaluation

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

### *Pediatric Asthma*

#### NQF #3668 Follow-Up After Emergency Department Visits for Asthma (Albert Einstein College of Medicine/University of California, San Francisco [UCSF]): Endorsed

**Description:** This process measure seeks to capture follow up after asthma-related emergency department (ED) visits for children with asthma after discharge from the ED, as recommended by the NHLBI 2007 guidelines. This measure assesses the percentage of asthma-related ED visits for children ages 3-21 with a follow-up visit with a primary care clinician or an asthma subspecialist within 14 days of discharge from the ED, within the reporting year, for patients who are enrolled in the health plan for two consecutive months following the ED visit; **Measure Type:** Process; **Level of Analysis**: Health Plan; **Setting of Care:** Ambulatory Care; **Data Source:** Claims

This health plan-level measure was newly submitted for endorsement. It is not yet publicly reported; however, this measure is currently implemented in three state-managed Medicaid groups: California, Massachusetts, and Vermont.

The Standing Committee agreed that the evidence supports the measure, which showed that for children who follow up with a PCP following an asthma-related ED visit, subsequent pediatric asthma-related ED visits are preventable. While the Standing Committee did find the evidence to be supportive, it requested clarification on several aspects of the measure during the discussion, including why the specified time frame of 14 days following an asthma-related ED visit was selected, how PCPs are incorporated into the measure, and the impact of documented history of an asthma diagnosis upon follow-up. The developer responded by explaining that the 14-day follow-up window was selected due to its strong association with decreased asthma-related ED utilization compared to the seven-day and 30-day windows. The developer reminded the Standing Committee that this measure is a health plan-level measure; therefore, the health plan should be helping to facilitate patients getting connected to a PCP. Lastly, the developer responded to the concern of diagnostic accuracy by explaining that clinicians would follow up with patients following an ED visit regardless of whether the child has an active history of asthma. The Standing Committee agreed that the measure was important and passed the measure on the evidence criterion. The Standing Committee also agreed that the data demonstrated that a performance gap exists and passed the measure on the performance gap criterion.

The Standing Committee requested clarification as to which visit types (i.e., in-person, telemedicine, and phone) are included in the measure specifications. The developer responded by explaining that the measure specifications capture submitted claims-based Medicaid data or commercial claims data regarding follow-up visits and the visit type would be dependent on which claims codes are submitted. The Standing Committee acknowledged that robust testing was conducted for reliability yet expressed concern regarding the validity testing and how the developer accounted for the missing data. The developer explained that the extent of missing data was minimal, ranging from 0.00044 percent to 2.3 percent, and did not warrant further analysis. The Standing Committee ultimately decided the measure was both reliable and valid.

The Standing Committee agreed that the data elements required for the measure are readily available and could be captured without undue burden. However, the Standing Committee questioned how health plans would capture various visit types, as there may be state variability related to managed Medicaid coverage. A Standing Committee member emphasized that health plans can utilize the International Classification of Diseases, Ninth Revision (ICD-9) and 10$^{th}$ Revision (ICD-10) codes to differentiate between telephonic, telehealth, and telemedicine visit types. The Standing Committee acknowledged that the measure is implemented in three state-managed Medicaid programs and passed the measure on feasibility and use.

The Standing Committee acknowledged that this is a new measure; therefore, there has not been an opportunity available to demonstrate trends in data or performance improvement. Concerning unintended consequences, a Standing Committee member noted the potential risk of labeling providers as low performers if they care for patients who reside in marginalized communities and experience barriers to follow-up care (e.g., time off work, transportation). The developer noted that the measure

encourages health plans to create those connections for patients with asthma with a PCP so that follow-up care can occur within the specified 14-day period. The developer further noted that they would continue monitoring for unintended consequences as the measure is implemented. The Standing Committee ultimately passed the measure on usability and overall suitability for endorsement.

The Standing Committee recommended the measure for initial endorsement. It also reviewed one related measure and agreed that the measure is harmonized to the extent possible. No NQF member or public comments were received. The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

### *Pediatric Sickle Cell Anemia*

#### NQF #2797 Transcranial Doppler Ultrasonography Screening Among Children With Sickle Cell Anemia (University of Michigan): Endorsed

**Description:** The percentage of children ages 2 through 15 years old with sickle cell anemia (Hemoglobin SS) who received at least one transcranial Doppler (TCD) screening within a year; **Measure Type:** Process; **Level of Analysis:** Health Plan; **Setting of Care:** Outpatient Services; **Data Source:** Claims

This health plan-level measure was originally endorsed in 2016. This measure is currently implemented in the Michigan Medicaid program; however, the measure is not publicly reported. The developer indicated plans for the measure to be publicly reported and used for quality improvement.

The Standing Committee questioned whether new evidence had been published since the last review in 2016. The developer attested that the evidence has not changed. Without further discussion, the Standing Committee accepted the previous evidence evaluation and passed the measure on the evidence criterion without a vote. The Standing Committee also agreed that there is a performance gap sufficient to warrant measurement and noted that the developer only evaluated disparities based on age. The Standing Committee recommended that the developer provide data for gender, income, and socioeconomic status (SES) in the future and passed the measure on the performance gap criterion.

The Standing Committee acknowledged that the measure specifications have not changed since the last endorsement review in 2016 and that the developer did not conduct additional reliability testing. The Standing Committee agreed that the measure was still reliable and accepted the previous evaluation rating. While the Standing Committee did acknowledge that the measure could distinguish between good- and poor-quality care, it encouraged the developer to consider risk-adjusting the measure using socioeconomic metrics, such as the Child Opportunity Index (COI), to identify differences in resources and neighborhood conditions. Ultimately, the Standing Committee passed the measure on validity.

The Standing Committee agreed that all the data elements are in defined fields and are available in electronic claims. The Standing Committee highlighted that the measure is not yet publicly reported, which is required within six years of initial endorsement. The developer explained that they were working towards public reporting and that results are provided to Michigan Medicaid Health quarterly; they also explained that this measure is being considered for inclusion in a Centers for Medicare & Medicaid Services' (CMS) core measure set. The Standing Committee accepted this rationale. There were also concerns that progress toward achieving the goal of high quality, efficient care was not

apparent from the improvement data that the developer submitted. The Standing Committee ultimately passed the measure on feasibility, use, usability, and overall suitability for endorsement.

The Standing Committee recommended the measure for continued endorsement. The Standing Committee also reviewed two related measures and agreed that the measures are harmonized to the extent possible. No NQF member or public comments were received. The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

### *Diabetes Management*

#### NQF #0729 Optimal Diabetes Care (Minnesota [MN] Community Measurement): Endorsed

**Description:** The percentage of patients 18-75 years of age who had a diagnosis of type 1 or type 2 diabetes and whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following: HbA1c less than 8.0 mg/dL; Blood Pressure less than 140/90 mmHg; On a statin medication, unless allowed contraindications or exceptions are present; Non-tobacco user; Patient with ischemic vascular disease is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present. Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component; **Measure Type:** Composite; **Level of Analysis:** Clinician: Group/Practice; **Setting of Care:** Ambulatory Care; **Data Source:** Electronic Health Records

This clinician group-level measure was originally endorsed in 2011. It is also a composite measure and is publicly reported nationally on the Minnesota (MN) HealthScores website and as part of the MN Community Measurement (MNCM) Annual Health Care Quality Report.

The Standing Committee requested clarification on why the components of the HbA1C, cholesterol management (i.e., statin therapy), and blood pressure values of the composite had changed since the last review. The developer explained that three separate workgroups were convened to review new evidence for the HbA1C, statin, and blood pressure components and that the values for these components are supported by current guidelines and recommendations from the Action to Control Cardiovascular Risk in Diabetes (ACCORD) and the American College of Cardiology (ACC)/American Heart Association (AHA). The Standing Committee agreed that the measure continues to be important to measure and passed the measure on the evidence criterion. The Standing Committee also agreed that a performance gap exists, noting a decline in measure performance since the start of the coronavirus disease 2019 (COVID-19) pandemic.

The Standing Committee raised a concern with the composite construct, specifically that two of the composite components, aspirin and cholesterol statin use, are not measuring the same population. The developer explained that modifications to the aspirin and statin use components reflected changes in both the evidence and guidelines to no longer include patients who do not have ischemic vascular disease. After confirming that these components provide an exception for patients for whom

contraindications exist, the Standing Committee accepted the developer's response and passed the measure on the composite quality construct criterion.

The Standing Committee noted that the reliability and validity testing were strong and raised no concerns. The Standing Committee also highlighted that a strong correlation exists between the overall result for Optimal Diabetes Care and four of the five components (i.e., blood pressure, HbA1C, statin use, and tobacco use). The Standing Committee ultimately passed the measure on reliability and validity, as well as composite empirical analysis.

The Standing Committee agreed that the data are captured in the routine delivery of care. It also acknowledged that the measure is publicly reported on the MN HealthScores website and as part of the MNCM Annual Health Care Quality Report and passed the measure on feasibility and use.

During the discussion of usability, the Standing Committee highlighted that the measure's performance has declined slightly since 2019 and that there has been an upward trend in statewide HbA1C averages, which the developer noted could have been aggravated by the COVID-19 pandemic. The Standing Committee also raised a concern about the potential for unintended consequences, specifically adverse drug reactions to the statin use component. The Standing Committee noted the potential for severe adverse reactions among patients with a medication intolerance to statin therapy, leading to adverse drug events, decreased quality of life, and interference with other medical regimens. The Standing Committee recommended that the developer include medication therapy risk assessments or mitigation plans within the components (e.g., pharmacogenomic testing) to reduce the risk of adverse drug events. One Standing Committee member noted that the statin and aspirin components include an exception for patients with contraindications to the medication therapy. The Standing Committee recommended that the developer continue monitoring for unintended consequences and consider complimentary measures that mitigate patient harm by ensuring that providers who use these measures assess the risks of adverse drug events with their patients. The Standing Committee passed the measure on use, usability, and overall suitability for endorsement.

The Standing Committee recommended the measure for continued endorsement. One related measure was identified for a component of the composite for discussion. The Standing Committee noted that other NQF-endorsed measures could also be regarded as related to other components of the composite, specifically measures focused on tobacco cessation and blood pressure control. The Standing Committee recommended that NQF review its policy on related and competing measures to ensure that the developers of those measures consider how to potentially harmonize further. One post-evaluation comment was received for this measure. The commenter recommended adding the prevention of diabetic foot ulcers to the measure description. The developer responded to this comment, acknowledging that while their diabetes composite measure did not contain a process measure component for foot exams, NQF #0056 *Comprehensive Diabetes Care: Foot Exam* did. The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

*Lobectomy Lung Surgery*

**NQF #3294 STS Lobectomy for Lung Cancer Composite Score (Society of Thoracic Surgeons [STS]): Endorsed**

**Description:** The STS Lobectomy Composite Score comprises two domains: 1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure) 2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room. The composite score is created by a weighted combination of the above two domains resulting in a single composite score. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following: 1 star: lower-than expected performance, 2 stars: as-expected-performance, 3 start: higher-than-expected-performance; **Measure Type:** Composite; **Level of Analysis:** Facility; **Setting of Care:** Inpatient/Hospital; **Data Source:** Other, Registry Data

This facility-level measure was originally endorsed in 2018. The measure results are publicly reported on the Society of Thoracic Surgeons (STS) public website for all consenting STS National Database participants.

The Standing Committee noted that the evidence provided supported the measure and that a performance gap exists for patients undergoing a lobectomy procedure. It further acknowledged that the quality construct of the composite is robust and passed the measure on evidence, performance gap, and composite quality construct.

The Standing Committee noted that the reliability and validity testing were strong and had no concerns. The Standing Committee discussed several topics related to the validity of the measure. Specifically, the Standing Committee questioned whether the developer plans to collect and stratify by social risk factors, specifically race and ethnicity. The developer explained that they are currently considering social risk stratification and are in the process of acquiring a geocoded deprivation index that they will eventually incorporate throughout their surgical database. Furthermore, the Standing Committee questioned how the developer handles missing data within the risk model. The developer responded by explaining that the STS recognizes the serious impact missing data have on the risk model and requires stringent data completeness from all participants. The Standing Committee also acknowledged that appropriate weighting and a high degree of validity exists to support the empirical analyses of the composite. The Standing Committee passed the measure on reliability and validity, as well as composite empirical analysis.

While the Standing Committee did agree that most of the data are readily available and can be captured without undue burden, it questioned how many of the data are available in electronic data fields and how 30-day mortality is captured once the patient is discharged from the facility. The developer explained that the data are entered on-site at the participating facility and uploaded to the data warehouse, from which the data are analyzed and subsequently populated into feedback reports. Furthermore, the developer agreed that the 30-day life status has been an area of focus over the years and is working towards incorporating the National Death Index for future maintenance review. The developer reiterated that participating facilities must have a 98 percent completion rate for the 30-day

status field to have their data included in the feedback reports. The Standing Committee ultimately passed the measure on feasibility.

After confirming that a high percentage of STS participants voluntarily publicly report their data, the Standing Committee agreed that facilities are using the measure for ongoing quality improvement and that the data demonstrate progress over time. Ultimately, the Standing Committee passed the measure on usability, use, and overall suitability for endorsement.

The Standing Committee recommended the measure for continued endorsement. No related and competing measures were identified for this measure. No NQF member or public comments were received. The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

## Measures Withdrawn From Consideration

Three measures previously endorsed by NQF either have not been resubmitted for maintenance of endorsement or were withdrawn during the endorsement evaluation process. Endorsement for these measures has been removed.

**Table 2. Measures Withdrawn From Consideration**

| Measure | Reason for Withdrawal |
|---|---|
| **NQF #0057 Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Testing** | Retired by developer. |
| **NQF #0062 Comprehensive Diabetes Care: Medical Attention for Nephropathy** | Retired by developer. |
| **NQF #3086 Population Level HIV Viral Load Suppression** | Retired by developer. |

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# Appendix A: Details of Measure Evaluation

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

NQF ensures that quorum is maintained for all live voting. Quorum is 66 percent of active Standing Committee members minus any recused Standing Committee members. Due to the exclusion of recused Standing Committee members from the quorum calculation, the required quorum for live voting may vary among measures. Quorum (13 out of 19 Standing Committee members) was reached and maintained throughout the full measure evaluation meeting on June 23, 2022. The post-comment call was not held for the spring 2022 cycle, as the comment received was in support of the Standing Committee's recommendations. Vote totals may differ between measure criteria and between measures because Standing Committee members may have joined the meeting late, stepped away for a portion of the meeting, or had to leave the meeting before voting was complete. The vote totals listed below reflect Standing Committee members present and eligible to vote at the time of the vote. Voting results are provided below.

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

## Measures Endorsed

### NQF #0729 Optimal Diabetes Care

Measure Worksheet | Specifications

**Description**: The percentage of patients 18-75 years of age who had a diagnosis of type 1 or type 2 diabetes and whose diabetes was optimally managed during the measurement period as defined by achieving ALL of the following: HbA1c less than 8.0 mg/dL; Blood Pressure less than 140/90 mmHg; On a statin medication, unless allowed contraindications or exceptions are present; Non-tobacco user; Patient with ischemic vascular disease is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present. Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component.

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

- The most recent HbA1c in the measurement period has a value less than 8.0 mg/dL
- The most recent Blood Pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg
- On a statin medication, unless allowed contraindications or exceptions are present
- Patient is not a tobacco user
- Patient with ischemic vascular disease (Ischemic Vascular Disease Value Set) is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present

**Denominator Statement**: Patients ages 18 to 75 with a diagnosis of diabetes with any contact during the current or prior measurement period OR had diabetes present on an active problem list at any time during the measurement period. Both contacts AND problem list must be queried for diagnosis AND patient has at least one established patient office or telehealth visit performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

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

**Adjustment/Stratification**: Statistical risk model

**Level of Analysis:** Clinician: Group/Practice

**Setting of Care:** Outpatient Services

**Type of Measure**: Composite

**Data Source**: Electronic Health Records

**Measure Steward**: Minnesota Community Measurement (MNCM)

**STANDING COMMITTEE MEETING [June 23, 2022]**

**1. Importance to Measure and Report:**

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

1a. Evidence: **Total Votes- 16**; **H-0**; **M-13**; **L-2**; **I-1**; 1b. Performance Gap: **Total votes- 16; H-6**; **M-10**; **L-0**; **I-0;** 1c. Composite- Quality Construct and Rationale: **Total votes- 16; H-0; M-15; L-1; I-0**

**Rationale**:

- While the Standing Committee did agree that the evidence provided by the developer supports the prevention of macro-and microvascular complications associated with diabetes, it requested clarification related to the updated guideline recommendations for the HbA1C, cholesterol management (i.e., statin therapy), and blood pressure components.
- The developer explained that three separate workgroups were convened to review new evidence for the HbA1c, statin, and blood pressure components and that the values for these components are supported by current guidelines and recommendations from the Action to Control Cardiovascular Risk in Diabetes (ACCORD) and the American College of Cardiology (ACC)/American Heart Association (AHA).
- A few Standing Committee members noted that several evidence-based components exist, which support optimal diabetes care that is not included, and recommended the following components in future iterations of the composite: diabetic eye exams; peripheral nerve evaluation and foot exams; kidney function measurement; macro/micro albuminuria; weight, BMI, and waist circumference; behavioral interventions; and dyslipidemia measurements (low high-density lipoprotein [HDL], high low-density lipoprotein [LDL], and high triglycerides).
- Ultimately, the Standing Committee agreed that the evidence supports comprehensive diabetes management and passed the measure on the evidence criterion.
- The Standing Committee noted that there was a significant decrease in performance across the races based on disparities data.
- Additionally, the Standing Committee noted that among sex, age group, insurance type, and neighborhood SES variables, there was a significant decrease in rates among females in the 40–49 age group, uninsured, and high SES.
- The Standing Committee agreed that there is an opportunity to improve performance. Fifty five percent of patients diagnosed with diabetes statewide have at least one component of the measure that is not optimally managed and there is variation in performance rates among females, the 40-49 age group, uninsured, and across racial and ethnic groups.
- The Standing Committee passed the measure on the performance gap criterion.
- The Standing Committee noted that this measure is an all-or-none composite, with the goal being for the patient to best reduce their overall risk of developing long-term complications by targeting all five components (i.e., blood pressure control, blood sugar control, tobacco-free patient, statin use, and daily aspirin or anti-platelet use as appropriate).
- The Standing Committee raised a concern with the composite construct, specifically that two of the composite components, aspirin and cholesterol statin use, are not measuring the same population.
- The developer explained that modifications to the aspirin and statin use components reflected changes in both the evidence and guidelines to no longer include patients who do not have ischemic vascular disease.
- After confirming that these components provide an exception for patients for whom contraindications exist, the Standing Committee accepted the developer's response and passed the measure on the composite quality construct and rationale criterion.

**2. Scientific Acceptability of Measure Properties:**

*(2a. Reliability precise specifications, testing; 2b. Validity testing, threats to validity; 2c. Composite Quality Construct- Empirical Analyses)*

2a. Reliability: **Total votes- 16**; **H-6**; **M-9**; **L-0**; **I-1**; 2b. Validity: **Total votes- 16**; **H-2**; **M-12**; **L-1**; **I-1**; 2c. Composite Quality Construct- Empirical Analyses: **Total votes- 15**; **H-1; M-12; L-1; I-1**

**Rationale:**

- The Scientific Methods Panel (SMP) did not review this measure.
- The Standing Committee noted that the developer conducted a signal-to-noise (SNR) analysis to assess reliability at the accountable-entity level, and among 618 reportable clinics in MN, the SNR ratio yielded mean reliability scores ranging from 0.519–0.994, a mean of 0.888, and a standard deviation (SD) of 0.103.
- The Standing Committee agreed that the reliability testing conducted at the accountable-entity level was robust and passed the measure on the reliability criterion.
- The Standing Committee noted that the developer conducted validity testing at the accountable-entity level for both the computed measure score and individual components of the composite.
- For the computed composite score, the Standing Committee noted that the developer tested the correlation of medical group performance with their performance on the *Optimal Vascular Care* measure (NQF #0076) using a linear regression analysis, which demonstrated a fairly strong correlation.
- The Standing Committee agreed that the number of exclusions (i.e., patients who are pregnant, who are permanent nursing home residents, or who died or were in hospice or palliative care during the measurement year) is relatively small and does not significantly impact measure performance.
- The Standing Committee noted that the measure was risk-adjusted using four risk factors: patient age and deprivation index as continuous variables and insurance product type and diabetes type as categorical variables.
- The Standing Committee agreed that the measure continues to demonstrate opportunity for improvement and can demonstrate statistically significant and clinically meaningful differences between medical group practices and clinics.
- The Standing Committee noted that this is an all-or-none composite measure; therefore, missing data from any component are counted as a numerator fail and the patient would not be accounted for in the numerator yet remain in the denominator.
- The Standing Committee noted that the correlation between the goal of the composite measure is for patients to achieve intermediate physiological outcomes and medication use targets to best decrease their overall risk of developing microvascular and macrovascular complications related to diabetes. The Standing Committee further noted that the developer measured the strength of linear regression of the relationship between the composite and its components and acknowledged that a strong correlation exists.
- The Standing Committee agreed that the validity testing conducted at the accountable-entity level was sufficient and passed the measure on the validity and composite empirical analysis criteria.

**3. Feasibility: Total votes- 16; H-12; M-3; L-0; I-1**

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

**Rationale:**

- The Standing Committee agreed that the data elements needed to compute the measure score could be collected and used by healthcare providers during the provision of care without undue burden on clinicians or clinician groups. Additionally, most of the clinical data elements can be feasibly captured in the electronic health record (EHR).
- The Standing Committee passed the measure on the feasibility criterion.

**4. Use and Usability:**

*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*

4a. Use: **Total votes-16**; **Pass-15; No Pass-1;** 4b. Usability: **Total votes-16*;* H-5; M-10; L-0; I-1**

**Rationale:**

- The Standing Committee acknowledged that the measure is currently in use within the MN Statewide Quality Reporting System and the MN Health Care Homes Certification/Recertification Program.
- Additionally, the Standing Committee noted that the measure is publicly reported on MN HealthScores (a consumer-facing public website) and as part of the MNCM Annual Health Care Quality Report.
- The Standing Committee highlighted that 78.5 percent of medical groups surveyed by the developer found the measure to be valuable and easy to report, and 63.4 percent found that the data elements needed were readily available.
- The Standing Committee noted that MN statewide rates increased from 9.5 percent in 2006 to 53.5 percent in 2015 and subsequently decreased from 46.3 percent in 2016 to 40.6 percent in 2021, which the developer attributed to the COVID-19 pandemic and fewer patients seeking care.
- The Standing Committee highlighted two unexpected findings provided by the developer: (1) Adults ages 65 and older with Medicare have better outcome rates than younger adults with diabetes due to generational differences related to compliance with providers' orders and 2) Statewide A1c averages are trending upward, which is a trend that the American Diabetes Association (ADA) has confirmed.
- One Standing Committee member raised a concern about the potential for medication intolerance and serious adverse drug events related to the statin use component. The Standing Committee noted that there is a high prevalence of the patient population (i.e., approximately 30 percent) that experiences a severe adverse reaction to statin medications, which leads to adverse drug events, decreased quality of life, and interference with other medical regimens. The Standing Committee member recommended that the developer include medication therapy risk assessments or mitigation plans within the components (e.g., pharmacogenomic testing) to reduce the risk of adverse drug events.
- The developer thanked the Standing Committee for the feedback, noting that the statin and aspirin components include an exception for patients with contraindications to medication therapy. One Standing Committee member noted that this has been a concern since the measure's inception and recommended that additional safety mechanisms be implemented (i.e., compensatory requirements, risk assessment) to address the risks for patients with medication intolerance.
- The Standing Committee recommended that the developer continue to monitor for unintended consequences and consider patient risk factors associated with medication therapy (i.e., past intolerance, side effects, and adverse event tracking) for future updates to the statin use component. Additionally, one Standing Committee member noted that alternative medications are available and should be considered by physicians if a patient is intolerant to statins.
- The Standing Committee ultimately passed the measure on the use and usability criteria.

**5. Related and Competing Measures**

- This measure is related to the following measure:
    - NQF #0061 Comprehensive Diabetes Care: Blood Pressure Control (140/90 mmHg)
- The Standing Committee noted that other NQF-endorsed measures could also be regarded as related to other components of the composite, specifically measures focused on tobacco cessation and HbA1c. The Standing Committee recommended that NQF review its policy on related and competing measures to ensure that the developers of those measures consider how to potentially harmonize further.

**6. Standing Committee Recommendation for Endorsement**: **Total votes-15**; **Y-13**; **N-2**

**7. Public and Member Comment**

- No public or NQF member comments were provided prior to or during the measure evaluation meeting.
- One post-evaluation comment was received for this measure. The commenter recommended adding the prevention of diabetic foot ulcers to the measure description. The developer responded to this comment, acknowledging that while their diabetes composite measure did not contain a process measure component for foot exams, NQF #0056 *Comprehensive Diabetes Care: Foot Exam* can be utilized.

**8. Consensus Standards Approval Committee (CSAC) Endorsement Decision: Total Votes-15; Yes-15; No-0 (December 9, 2022: Endorsed)**

- The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement.

**9. Appeals**

- No appeals were received.

## NQF #2797 Transcranial Doppler Ultrasonography Screening Among Children With Sickle Cell Anemia

Measure Worksheet | Specifications

**Description**: The percentage of children ages 2 through 15 years old with sickle cell anemia (Hemoglobin SS) who received at least one transcranial Doppler (TCD) screening within a year.

**Numerator Statement**: The numerator is the number of children ages 2 through 15 years old with sickle cell anemia who received at least one TCD screening within the measurement year.

**Denominator Statement**: The denominator is the number of children ages 2 through 15 years with sickle cell anemia within the measurement year.

**Exclusions**: There are no denominator exclusions.

**Adjustment/Stratification**: No risk adjustment or risk stratification

**Level of Analysis:** Health Plan

**Setting of Care:** Other, Outpatient Services

**Type of Measure**: Process

**Data Source**: Claims

**Measure Steward**: The University of Michigan

**STANDING COMMITTEE MEETING [June 23, 2022]**

**1. Importance to Measure and Report:**

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

1a. Evidence: **Accepted Previous Evaluation**; 1b. Performance Gap: **Total votes-17; H-5**; **M-12**; **L-0**; **I-0**

**Rationale**:

- The Standing Committee questioned whether new evidence had been published since the last review in 2016. The developer attested that the evidence has not changed. The Standing Committee noted that the developer provided a systematic review of the 2014 National Heart, Lung, and Blood Institute (NHLBI) guidelines, which support annual TCD screening among children diagnosed with SCA between 2 and 15 years of age.
- Without further discussion, the Standing Committee accepted the previous evidence evaluation and passed the measure on evidence without a vote.
- The Standing Committee agreed that there is a performance gap sufficient to warrant measurement and noted that while the data have not shown disparities in care based on gender, insurance or SES status, children between the ages of 2 and 6 had a higher TCD screening rate (36 percent) compared to older children between the ages of 7 and 11 (31 percent) and 12 and 15 years of age (25 percent).
- The Standing Committee recommended that the developer provide data for gender, income, and SES in the future and passed the measure on the performance gap criterion.

**2. Scientific Acceptability of Measure Properties:**

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

2a. Reliability: **Accepted Previous Evaluation**; 2b. Validity: **Total votes-17; H-1; M-16; L-0; I-0**

**Rationale:**

- The SMP did not review this measure.
- The Standing Committee acknowledged that the measure specifications have not changed since the last endorsement review in 2016 and that the developer did not conduct additional reliability testing.
- The Standing Committee noted that the developer previously conducted empirical reliability testing at the accountable-entity level using an SNR analysis, yielding reliability statistics ranging from 0.96–0.99 (median 0.98).
- The Standing Committee did not raise any concerns regarding the reliability testing and accepted the previous evaluation rating.
- The Standing Committee noted that the developer conducted updated denominator validation testing at the patient/encounter level and agreed that the sensitivity and specificity values for the ICD-9 and ICD-10 diagnosis codes can identify children with SCA with a high level of accuracy.
- The Standing Committee further noted that the agreement for TCD screening rates between Michigan Medicaid claims and medical record data from 2005 to 2010 was 96.7 percent.

- The Standing Committee noted that the developer conducted empirical validity testing at the accountable-entity level by calculating the rate of TCD screening for Michigan MAX data from 2007–2009 and the Michigan Medicaid claims data warehouse with z-scores ranging from -0.685 to 1.079 and agreed that the validity testing was robust.
- The Standing Committee noted that the measure is not risk-adjusted or stratified and encouraged the developer to consider risk-adjusting the measure using socioeconomic metrics, such as the Child Opportunity Index (COI), to identify differences in resources and neighborhood conditions.
- The Standing Committee acknowledged that the measure could distinguish between good- and poor-quality care and ultimately passed the measure on the validity criterion.

**3. Feasibility: Total votes-17; H-6; M-11; L-0; I-0**

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

**Rationale:**

- The Standing Committee agreed that all the data elements are in defined fields and available in electronic claims and routinely generated and used during care delivery.
- The Standing Committee passed the measure on the feasibility criterion.

**4. Use and Usability:**

*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*

4a. Use: **Total votes-17**; **Pass-17; No Pass-0;** 4b. Usability: **Total votes-16***;* **H-5; M-7; L-1; I-3**

**Rationale:**

- The Standing Committee noted that the measure is used within the Michigan Medicaid program to improve the rates of TCD screening among children with SCA in southeast Michigan.
- The Standing Committee highlighted that the measure is not yet publicly reported, which is required within six years of initial endorsement.
- The developer explained that they were working towards public reporting and that the results are provided to Michigan Medicaid Health quarterly; they also explained that this measure is being considered for inclusion in the Centers for Medicare & Medicaid Services' (CMS) core measure sets. The Standing Committee accepted this rationale and passed the measure on the use criterion.
- The Standing Committee noted that the developer provides results to Michigan Medicaid health plans on a quarterly basis; however, quality improvement efforts have recently begun, and improvement is not yet apparent.
- While the Standing Committee did have concerns that the progress toward achieving the goal of high quality, efficient care was not apparent because the developer for this measure did not submit any improvement data, the Standing Committee agreed that this is an important measure and passed it on the usability criterion.

**5. Related and Competing Measures**

- This measure is related to the following measures:
    - NQF #3166 Antibiotic Prophylaxis Among Children With Sickle Cell Anemia
    - NQF #3595 Hydroxyurea Use Among Children With Sickle Cell Anemia
- The Standing Committee reviewed the two related measures and agreed that the measures are harmonized to the extent possible.

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

**7. Public and Member Comment**

- No NQF member or public comments were received.

**8. Consensus Standards Approval Committee (CSAC) Endorsement Decision: Total Votes-15; Yes-15; No-0 (December 9, 2022: Endorsed)**

- The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement.

**8. Appeals**

- No appeals were received.

## NQF #3294 STS Lobectomy for Lung Cancer Composite Score

Measure Worksheet | Specifications

**Description**: The STS Lobectomy Composite Score comprises two domains: 1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure); 2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room. The composite score is created by a weighted combination of the above two domains resulting in a single composite score. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following: 1 star: lower-than expected performance; 2 stars: as-expected-performance; 3 start: higher-than-expected-performance.

**Numerator Statement**: The STS Lobectomy Composite Score comprises two domains: 1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure); 2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room. The composite score is created by a weighted combination of the above two domains resulting in a single composite score. Operative mortality and major complications were weighted inversely by their respective standard deviations across participants. This procedure is equivalent to first rescaling mortality and complications by their respective standard deviations and then assigning equal weighting to the rescaled mortality rate and rescaled complication rate. This is the same methodology used for other STS composite measures. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following: 1 star: lower-than expected performance; 2 stars: as-expected-performance; 3 start: higher-than-expected-performance. Patient Population: The STS GTSD was queried for all patients treated with lobectomy for lung cancer between January 1, 2014, and December 31, 2016. We excluded patients with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status. Time Window: 01/01/2014 – 12/31/2016. Model variables: Variables in the model: age, sex, year of operation, body mass index, hypertension, steroid therapy, congestive heart failure, coronary artery disease, peripheral vascular disease, reoperation, preoperative chemotherapy within 6 months, cerebrovascular disease, diabetes mellitus, renal failure, dialysis, past smoker, current smoker, forced expiratory volume in 1 second percent of predicted, Zubrod score (linear plus quadratic), American Society of Anesthesiologists class (linear plus quadratic), and pathologic stage.

**Denominator Statement**: Number of patients greater than or equal to 18 years of age undergoing elective lobectomy for lung cancer.

**Exclusions**: Patients were excluded with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status.

**Adjustment/Stratification**: Statistical risk model

**Level of Analysis:** Facility

**Setting of Care:** Inpatient/Hospital

**Type of Measure**: Composite

**Data Source**: Other, Registry Data

**Measure Steward**: The Society of Thoracic Surgeons (STS)

**STANDING COMMITTEE MEETING [June 23, 2022]**

**1. Importance to Measure and Report:**

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

1a. Evidence: **Total Votes-15**; **Pass- 15**; **No Pass-0**; 1b. Performance Gap: **Total votes-15; H-5**; **M-10**; **L-0**; **I-0;** 1c. Composite- Quality Construct and Rationale: **Total votes-15; H-6; M-9; L-0; I-0**

**Rationale**:

- The Standing Committee noted that the developer provided updated evidence from a 2020 study that supports minimally invasive lung cancer resection, which can reduce perioperative mortality and morbidity.

- The Standing Committee agreed that the evidence supported the composite measure and that the composite score from a weighted combination of mortality and operative complications provides a more comprehensive measure of overall surgical quality.
- The Standing Committee noted that cases are higher in those who are White, compared to those who are Black, Hispanic, or Asian.
- The Standing Committee further noted that the gap among females was higher than males and higher for those less than 65 years of age with commercial/Health Maintenance Organization (HMO) insurance and those greater than or equal to 65 years of age with Medicare and commercial insurance without Medicaid.
- The Standing Committee agreed that a performance gap exists and that there was room for improvement.
- The Standing Committee agreed that the quality construct and rationale for the composite are explicitly stated and logical, and the weighting and approach to the measure's construction are described clearly and have been vetted by an expert panel.
- The Standing Committee passed the measure on the evidence, performance gap, and composite quality construct and rationale criteria.

**2. Scientific Acceptability of Measure Properties:**

*(2a. Reliability precise specifications, testing; 2b. Validity testing, threats to validity; 2c. Composite Quality Construct- Empirical Analyses)*

2a. Reliability: **Total votes-13; H-2; M-11; L-0; I-0;** 2b. Validity: **Total votes-14; H-3; M-11; L-0; I-0;** 2c. Composite Quality Construct- Empirical Analyses: **Total votes-14; H-2; M-12; L-0; I-0**

**Rationale:**

- The SMP did not review this measure.
- The Standing Committee noted that the developer conducted reliability testing at the accountable-entity level using an SNR analysis among 233 STS participating facilities and noted ranges from 44.6 percent to 68 percent.
- The Standing Committee further noted that providers with at least 30, 50, and 100 cases have reliability scores of 51.7 percent, 56.1 percent, and 60.9 percent, respectively, and large-volume participants (at least 150 cases) have a reliability estimate of 68.0 percent.
- The Standing Committee agreed that the reliability testing was sufficient and passed the measure on the reliability criterion.
- The Standing Committee noted that the developer performed empirical validity testing of the composite measure score among three-star rating performance categories (high, average, and low). Providers receiving three stars had lower observed mortality risk (0.4 percent versus 2.9 percent) and morbidity risk (2.3 percent versus 20.0 percent) compared to the participants receiving one star.
- The Standing Committee further noted that the developer assessed composite score stability among 654 participants with at least 10 eligible cases using Pearson's correlation and Spearman's correlation.
- The Standing Committee noted that the developer assessed the risk adjustment model's calibration and discrimination using Hosmer-Lemeshow statistic and C-statistics and agreed that the goodness-of-fit results and major morbidity indicate good discrimination power that is suitable for controlling for differences in the case-mix between centers.
- One Standing Committee questioned whether the developer plans to collect and stratify by social risk factors, specifically race and ethnicity.
- The developer explained that they are currently considering social risk stratification and are in the process of acquiring a geocoded deprivation index that they will eventually incorporate throughout their surgical database.
- The Standing Committee noted that the overall measure exclusions were 3.2 percent.
- One Standing Committee member questioned how the developer handles missing data within the risk model.
- The developer responded by explaining that the STS recognizes the serious impact missing data have on the risk model and requires stringent data completeness from all participants. The Standing Committee accepted the developer's response and had no further questions related to missing data.
- The Standing Committee also acknowledged that appropriate weighting and a high degree of validity exists to support the empirical analyses of the composite.

- The Standing Committee noted that the validity testing was strong and passed the measure on validity and composite empirical analysis criteria.

**3. Feasibility: Total votes-14; H-4; M-10; L-0; I-0**

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

**Rationale:**

- While the Standing Committee did agree that most of the data are readily available and can be captured without undue burden, it questioned how many of the data are available in electronic data fields. The developer explained that the data are entered on-site at the participating facility and uploaded to the data warehouse, from which the data are analyzed and subsequently populated into feedback reports.
- The Standing Committee questioned how 30-day mortality is captured once the patient is discharged from the facility. The developer replied that the 30-day life status has been an area of focus over the years and is working towards incorporating the National Death Index for future maintenance review.
- Furthermore, the developer reiterated that participating facilities must have a 98 percent completion rate for the 30-day status field to have their data included in the feedback reports.
- The Standing Committee accepted the developer's response and passed the measure on the feasibility criterion.

**4. Use and Usability:**

*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*

4a. Use: **Total votes-14**; **Pass-14; No Pass-0;** 4b. Usability: **Total votes-14***;* **H-6; M-8; L-0; I-0**

**Rationale:**

- The Standing Committee acknowledged that the developer publishes results on its website annually for consenting STS National Database participants.
- The Standing Committee questioned whether the developer publicly reported performance results.
- The developer explained that they do not mandate participants to report results publicly. However, approximately 47 percent of STS General Thoracic Surgery Database (GTSD) participants were enrolled in public reporting and received participant-level results on the following: discharge mortality, median postoperative length of stay for lobectomy procedures for lung cancer, and STS GTSD and National Inpatient Sample (NIS) benchmarks.
- One Standing Committee member questioned how performance results are translated into the star rating system and used for ongoing quality improvement.
- The developer explained that performance is translated into stars (one, two, or three stars) based on Bayesian modeling, which utilizes 95 percent credible intervals. The developer continued to note that once programs are assigned a star rating, they can be tracked annually, and performance trends can be examined. The developer further explained that three-star programs could be studied to identify what they are doing well, and one-star programs can perform an internal analysis and identify opportunities for performance improvement.
- Ultimately, the Standing Committee passed the measure on usability, use, and overall suitability for endorsement.

**5. Related and Competing Measures**

- No related or competing measures were noted.

**6. Standing Committee Recommendation for Endorsement**: **Total votes-15**; **Y-15**; **N-0**

**7. Public and Member Comment**

- No NQF member or public comments were received.

**8. Consensus Standards Approval Committee (CSAC) Endorsement Decision: Total Votes-15; Yes-15; No-0 (December 9, 2022: Endorsed)**

- The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement.

**8. Appeals**

- No appeals were received.

## NQF #3668 Follow-Up After Emergency Department Visits for Asthma

Measure Worksheet | Specifications

**Description**: This process measure seeks to capture follow up after asthma-related emergency department (ED) visits for children with asthma after discharge from the ED, as recommended by the NHLBI 2007 guidelines. This measure assesses the percentage of asthma-related ED visits for children ages 3-21 with a follow-up visit with a primary care clinician or an asthma subspecialist within 14 days of discharge from the ED, within the reporting year, for patients who are enrolled in the health plan for two consecutive months following the ED visit.

**Numerator Statement**: The numerator assesses whether there was a follow-up visit within 14 days to a primary care or asthma-specific subspecialty provider.

**Denominator Statement**: Children 3-21 years of age with an asthma-related ED visit (primary or second diagnosis (in the second diagnostic spot) of asthma) during the measurement year, with at least 2 months of insurance enrollment after the ED visit.

**Exclusions**: None

**Adjustment/Stratification**: No risk adjustment or risk stratification

**Level of Analysis:** Health Plan

**Setting of Care:** Ambulatory Care

**Type of Measure**: Process

**Data Source**: Claims

**Measure Steward**: Albert Einstein College of Medicine

**STANDING COMMITTEE MEETING [June 23, 2022]**

**1. Importance to Measure and Report:**

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

1a. Evidence: **Total Votes-16**; **H-0**; **M-14**; **L-2**; **I-0**; 1b. Performance Gap: **Total votes-16; H-4**; **M-12**; **L-0; I-0**

**Rationale**:

- The Standing Committee agreed that the evidence supports the measure, which showed that for children who follow up with a PCP following an asthma-related ED visit, subsequent pediatric asthma-related ED visits are preventable.
- The Standing Committee requested clarification as to why the specified period of 14 days following an asthma-related ED visit was selected. The developer explained that the 14-day follow-up window was selected due to its strong association with decreased asthma-related ED utilization compared to the seven-day and 30-day windows. The Standing Committee had no further questions regarding the 14-day follow-up window.
- One Standing Committee requested clarification on how PCPs are incorporated into the measure and noted that if the patient did not have an established PCP, getting them in the office for a visit within 14 days might be challenging. The developer advised that PCPs would typically follow up with all patients following an ED visit regardless of whether the child has an active history of asthma to ensure that the child is doing okay. The developer reminded the Standing Committee that this is a health plan-level measure, meaning the health plan should be helping to facilitate patients getting connected to a PCP, and that the measure promotes movement toward better access to follow-up care.
- One Standing Committee member questioned whether the developer considered the claims submission process (i.e., the duration of time between the submission of an ED claim and the 14-day follow-up visit). Furthermore, the Standing Committee member noted that some states do not assign all members with a PCP and questioned how the follow-up would occur for patients who do not have a pre-established PCP. The developer explained that the goal would be for all Medicaid members to have pre-established, assigned PCPs and that connections to follow-up visits should occur soon after an ED visit.
- The Standing Committee agreed that there is variation that is meaningful across practices, as the average health plan rate for follow-up visits is 22.1 percent with a range of 11.7 percent (lowest decile) to 43.0 percent (highest decile).
- The Standing Committee also agreed that gaps are present in disparities across races and insurance types, as those who are Black and have Medicaid FFS were less likely to have follow-up visits after an ED discharge.

- The Standing Committee agreed that the measure was important and passed the measure on the evidence criterion.
- The Standing Committee also agreed that the data demonstrated that a performance gap exists and passed the measure on the performance gap criterion.

**2. Scientific Acceptability of Measure Properties:**

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

2a. Reliability: **Total votes-16**; **H-6**; **M-9**; **L-1**; **I-0**; 2b. Validity: **Total votes-16**; **H-1**; **M-14**; **L-1**; **I-0**

**Rationale:**

- The SMP did not review this measure.
- The Standing Committee questioned whether alternative visit types (i.e., in-person, telemedicine, and phone) are included. The developer advised that the numerator does not differentiate between telehealth and in-person visits. Therefore, all claims-based Medicaid data and commercial claims data are included for the follow-up visits.
- The Standing Committee noted that the developer conducted reliability testing at the accountable-entity level using 2015 California Medicaid managed care and Medicaid FFS claims data.
- The Standing Committee further noted that the developer used random split-half reliability testing, which yielded a mean intraclass correlation (ICC) of 0.83 for all plans.
- The Standing Committee agreed that the reliability testing was robust and passed the measure on the reliability criterion.
- The Standing Committee noted that the developer conducted predictive validity testing and agreed that a statistically significant relationship exists between performances on the quality measure—follow-up for pediatric patients with an index asthma-related ED visit within 14 days and decreased asthma-related subsequent ED revisits within 60- and 365-day intervals.
- The Standing Committee noted that this measure does not have exclusions and is not risk-stratified or risk-adjusted.
- The Standing Committee noted that the developer assessed statistically significant differences in performance by calculating the predicted plan random effects from a mixed effects logit model using individual-level data, including only the measure performance as the outcome and including the plan variable as a random effect. Higher health plan performers had a higher mean percent performance than average performers and low performers.
- The Standing Committee questioned why no missing data were reported. The developer advised that missing data represented exceedingly small numbers ranging from 0.00044 percent to 2.3 percent, and these numbers did not warrant further analysis.
- The Standing Committee accepted this explanation, agreed that the measure was valid, and passed the measure on validity.

**3. Feasibility: Total votes-16; H-3; M-13; L-0; I-0**

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

**Rationale:**

- One Standing Committee member questioned how health plans would capture various visit types due to the potential variability on what claims are eligible under state-specific managed Medicaid coverage. A Standing Committee member emphasized that health plans can utilize the ICD-9 and ICD-10 codes to differentiate between telephonic, telehealth, and telemedicine visit types. There was no further discussion related to visit types.
- The Standing Committee agreed that the measure data elements are readily available and could be captured without undue burden and passed the measure on the feasibility criterion.

**4. Use and Usability:**

*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*

4a. Use: **Total votes-16**; **Pass-15; No Pass-1;** 4b. Usability: **Total votes-17***;* **H-1; M-15; L-1; I-0**

**Rationale:**

- The Standing Committee acknowledged that the measure is implemented in three state-managed Medicaid programs and passed the measure on the use criterion.

- The Standing Committee acknowledged that this is a new measure; therefore, there has not been an opportunity available to demonstrate trends in data or performance improvement.
- One Standing Committee member raised concern with the potential risk of labeling providers as low performers if they care for patients who reside in marginalized communities and experience barriers to follow-up care (e.g., time off work, transportation). The developer explained that the measure encourages health plans to create those connections for patients with asthma to a PCP so that follow-up care can occur within the specified 14-day period. The developer further noted that they would continue monitoring for unintended consequences as the measure is implemented.
- One Standing Committee member raised concern with the variation in ED visit notifications among state-specific Medicaid health plans and how that might impact the usability of the measure if the accountable entity receives notice past the 14-day time frame.
- The developer explained that the measure incentivizes PCPs, emergency providers, and health plans to implement processes to establish connections with patients, specifically patients with asthma, so that outreach can occur within the 14-day time frame; they also stated that they intend to monitor usability as the measure gets to put more into practice.
- The Standing Committee accepted the developer's rationale and passed the measure on the use and usability criteria.

**5. Related and Competing Measures**

- This measure is related to the following measure:
    - NQF #3599 Pediatric Asthma Emergency Department Use
- The Standing Committee reviewed one related measure and agreed that the measure is harmonized to the extent possible.

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

**7. Public and Member Comment**

- No NQF member or public comments were received.

**8. Consensus Standards Approval Committee (CSAC) Endorsement Decision: Total Votes-15; Yes-15; No-0 (December 9, 2022: Endorsed)**

- The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement.

**9. Appeals**

- No appeals were received.

## Appendix B: PCCI Portfolio—Use in Federal Programs*

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 0046 | Screening for Osteoporosis for Women 65-85 Years of Age | Care Compare<br>Merit-Based Incentive Payment System Program (MIPS)<br>HEDIS Quality Measure Rating System |
| 0047 | Asthma: Pharmacologic Therapy for Persistent Asthma | None |
| 0053 | Osteoporosis Management in Women Who Had a Fracture | MIPS<br>HEDIS Quality Measure Rating System |
| 0055 | Comprehensive Diabetes Care: Eye Exam (Retinal) Performed | Care Compare<br>HEDIS Quality Measure Rating System<br>MIPS |
| 0056 | Comprehensive Diabetes Care: Foot Exam | None |
| 0058 | Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis (AAB) | None |
| 0059 | Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) | None |
| 0061 | Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg) | HEDIS Quality Measure Rating System |
| 0069 | Appropriate Treatment for Children With Upper Respiratory Infection (URI) | None |
| 0086 | Primary Open-Angle Glaucoma (POAG): Optic Nerve Evaluation | MIPS<br>Care Compare |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 0086e | Primary Open-Angle Glaucoma (POAG): Optic Nerve Evaluation | MIPS<br>Care Compare |
| 0087 | Age-Related Macular Degeneration: Dilated Macular Examination | MIPS<br>Care Compare |
| 0088 | Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy | None |
| 0088e | Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy | None |
| 0091 | COPD: Spirometry Evaluation | Care Compare<br>HEDIS Quality Measure Rating System |
| 0102 | COPD: Inhaled Bronchodilator Therapy | MIPS<br>Care Compare |
| 0405 | HIV/AIDS: Pneumocystis Jiroveci Pneumonia (PCP) Prophylaxis | None |
| 0409 | HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis | MIPS |
| 0416 | Diabetic Foot & Ankle Care, Ulcer Prevention – Evaluation of Footwear | Care Compare<br>MIPS |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 0417 | Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation | Care Compare<br>MIPS |
| 0541 | Proportion of Days Covered (PDC): Three Rates by Therapeutic Category | None |
| 0563 | Primary Open-Angle Glaucoma: Reduction of Intraocular Pressure by 15% or Documentation of a Plan of Care | MIPS |
| 0564 | Cataracts: Complications Within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures | Care Compare |
| 0564e | Cataracts: Complications Within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures | Care Compare |
| 0565 | Cataracts: 20/40 or Better Visual Acuity Within 90 Days Following Cataract Surgery | Care Compare<br>MIPS |
| 0565e | Cataracts: 20/40 or Better Visual Acuity Within 90 Days Following Cataract Surgery | Care Compare<br>MIPS |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 0566 | Age-Related Macular Degeneration (AMD): Counseling on Antioxidant Supplement | None |
| 0575 | Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%) | HEDIS Quality Measure Rating System<br>Marketplace Quality Rating System (MQRS) |
| 0577 | Use of Spirometry Testing in the Assessment and Diagnosis of COPD | None |
| 0653 | Acute Otitis Externa: Topical Therapy | Care Compare |
| 0654 | Acute Otitis Externa: Systemic Antimicrobial Therapy – Avoidance of Inappropriate Use | Care Compare<br>MIPS |
| 0655 | Otitis Media With Effusion: Antihistamines or Decongestants – Avoidance of Inappropriate Use | None |
| 0657 | Otitis Media With Effusion: Systemic Antimicrobials – Avoidance of Inappropriate Use | MIPS |
| 0729 | Optimal Diabetes Care | None |
| 1800 | Asthma Medication Ratio | Medicaid: Adult Core Set<br>MQRS<br>HEDIS Quality Measure Rating System<br>Medicaid: Child Core Set |
| 2079 | HIV Medical Visit Frequency | Care Compare<br>MIPS |
| 2080 | Gap in HIV Medical Visits | None |
| 2082 | HIV Viral Load Suppression | Medicaid: Adult Core Set<br>MIPS |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 2083 | Prescription of HIV Antiretroviral Therapy | None |
| 2522 (Approved for Trial Use) | Rheumatoid Arthritis: Tuberculosis Screening | None |
| 2523 | Rheumatoid Arthritis: Assessment of Disease Activity | None |
| 2524e | Rheumatoid Arthritis: Patient-Reported Functional Status Assessment | None |
| 2525 (Approved for Trial Use) | Rheumatoid Arthritis: Disease Modifying Anti-Rheumatic Drug (DMARD) Therapy | None |
| 2549e (Approved for Trial Use) | Gout: Serum Urate Target | None |
| 2550e (Approved for Trial Use) | Gout: ULT Therapy | None |
| 2797 | Transcranial Doppler Ultrasonography Screening Among Children With Sickle Cell Anemia | None |
| 2811e | Acute Otitis Media - Appropriate First-Line Antibiotics | None |
| 2856 | Pharmacotherapy Management of COPD Exacerbation | HEDIS Quality Measure Rating System |
| 3059e (Approved for Trial Use) | One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk | Care Compare<br>MIPS |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 3166 | Antibiotic Prophylaxis Among Children With Sickle Cell Anemia | None |
| 3209e | HIV Medical Visit Frequency | None |
| 3210e | HIV Viral Load Suppression | None |
| 3211e | Prescription of HIV Antiretroviral Therapy | None |
| 3294 | STS Lobectomy for Lung Cancer Composite Score | None |
| 3332 | Psychosocial Screening Using the Pediatric Symptom Checklist-Tool (PSC-Tool) | None |
| 3475e | Appropriate Use of DXA Scans in Women Under 65 Years Who Do Not Meet the Risk Factor Profile for Osteoporotic Fracture | MIPS |
| 3532 | Discouraging the Routine Use of Occupational and/or Supervised Physical Therapy After Carpal Tunnel Release | None |
| 3568 | Person-Centered Primary Care Measure PRO-PM | None |
| 3595 | Hydroxyurea Use Among Children With Sickle Cell Anemia | None |
| 3599 | Pediatric Asthma Emergency Department Use | None |

| NQF# | Title | Federal Programs (Finalized or Implemented) |
|---|---|---|
| 3617 | Measuring the Value-Functions of Primary Care: Provider Level Continuity of Care Measure | None |
| 3668 | Follow-Up After Emergency Department Visits for Asthma | None |

*Adapted from CMS Measures Inventory Tool. Last Accessed on January 9, 2023.

# Appendix C: PCCI Standing Committee and NQF Staff

PRIMARY CARE AND CHRONIC ILLNESS STANDING COMMITTEE

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# Appendix D: Measure Specifications

## NQF #3668 Follow-Up After Emergency Department Visits for Asthma

### STEWARD

Albert Einstein College of Medicine

### DESCRIPTION

This process measure seeks to capture follow up after asthma-related emergency department (ED) visits for children with asthma after discharge from the ED, as recommended by the NHLBI 2007 guidelines. This measure assesses the percentage of asthma-related ED visits for children ages 3-21 with a follow-up visit with a primary care clinician or an asthma subspecialist within 14 days of discharge from the ED, within the reporting year, for patients who are enrolled in the health plan for two consecutive months following the ED visit.

### TYPE

Process

### DATA SOURCE

Claims

Data used are administrative claims. These are usually available as state-level files for Medicaid patients or as all-payer claims databases, and are able to be analyzed using SAS or another programming language.

### LEVEL

Health Plan

### SETTING

Ambulatory Care

### NUMERATOR STATEMENT

The numerator assesses whether there was a follow-up visit within 14 days to a primary care or asthma-specific subspecialty provider.

### NUMERATOR DETAILS

Of the eligible asthma ED visits described in the denominator, those with outpatient follow-up with a primary care clinician or asthma specialist within 14 days of discharge from the ED. Outpatient visits are identified using CPT codes for outpatient and preventive care visits (see excel spreadsheet tab “Outpatient visits (numerator)”. Provider type is defined using taxonomy codes from NPPES named below ("Provider Type of Follow-up Clinicians) and listed in the excel spreadsheet tab “NPPES codes (numerator)”. Provider Type of Follow-up Clinicians Allergy and Immunology Internal Medicine Notes: Pulmonary medicine is included under Pediatrics and/or Internal Medicine. This is identified according to the NPIs primary specialization noted in NPPES. These are also listed in the excel file tab “NPPES codes (numerator)”

### DENOMINATOR STATEMENT

Children 3-21 years of age with an asthma-related ED visit (primary or second diagnosis (in the second diagnostic spot) of asthma) during the measurement year, with at least 2 months of insurance enrollment after the ED visit.

### DENOMINATOR DETAILS

Patients between the ages of 3 and 21 at the time of the index ED visit are eligible.  Some of these patients may have started the measurement year at the age of 2 years old and some may become 22 years old during the measurement year, but if they are 3-21 years old at the time of the index ED visit they are eligible for inclusion. To identify patients who have had an ED visit during the measurement year, eligible patient claims are examined for ED visits, using CPT

and revenue codes to identify those visits (see Excel spreadsheet for ED visit codes to identify ED visit types, tab “ED Visits (denominator)”). To identify eligible ED visits, eligible claims should be examined for visits with ICD9 and ICD10 diagnoses used to define asthma in the first or second diagnostic spot, (see Excel spreadsheet for ED visit codes to identify ED visit types, tab “Asthma ICD codes (denominator)”).

EXCLUSIONS

None

EXCLUSION DETAILS

N/A

RISK ADJUSTMENT

No risk adjustment or stratification

STRATIFICATION

NA

TYPE SCORE

Categorical, e.g., yes/no

Better quality = Higher score

ALGORITHM

Step 1: Look for any qualifying events (eligible events) using the criteria for ED visits during the first 11.5 months of the enrollment year. Step 2: Assess eligibility for events that occur in each month by confirming that the child was continuously enrolled for 2 months following the month in which the ED visit occurs (3 months total including the index month). Step 3: The denominator is all events identified in Step 1 who meet the continuous enrollment criteria in Step 2. Once denominator visits have been identified: Step 4: Assess whether a follow-up visit has occurred in any setting in the 14 days after discharge Step 5: If follow-up occurs, assess NPI taxonomy code and whether practitioner is in any of the specialties listed in Table 1. Calculate percent of visits, by health plan, on day of ED visit with a follow-up within 14 days after discharge.

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N/A

N/A

## NQF #2797 Transcranial Doppler Ultrasonography Screening Among Children With Sickle Cell Anemia

STEWARD

Q-METRIC – The University of Michigan

DESCRIPTION

The percentage of children ages 2 through 15 years old with sickle cell anemia (Hemoglobin SS) who received at least one transcranial Doppler (TCD) screening within a year.

TYPE

Process

DATA SOURCE

Claims

N/A

LEVEL

Health Plan

SETTING

Outpatient Services, Other

NUMERATOR STATEMENT

The numerator is the number of children ages 2 through 15 years old with sickle cell anemia who received at least one TCD screening within the measurement year.

NUMERATOR DETAILS

Cases from target population with target process (Receipt of TCD screening): Receipt of TCD screening is identified as the presence of at least one CPT code for any of five acceptable ultrasonography tests within the measurement year among children in the target population. Acceptable CPT codes are: 93886 (complete study), 93888 (limited study), 93890 (vasoreactivity study), 93892 (emboli detection without intravenous microbubble injection), and 93893 (emboli detection with intravenous microbubble injection).

DENOMINATOR STATEMENT

The denominator is the number of children ages 2 through 15 years with sickle cell anemia within the measurement year.

DENOMINATOR DETAILS

Children with sickle cell anemia are identified through the presence of at least three separate healthcare encounters related to sickle cell anemia (defined as hemoglobin [Hb]SS) within the measurement year. Sickle cell anemia-related healthcare encounters are identified through ICD codes. The ICD-9-CM codes to identify HbSS-related healthcare encounters are as follows: 282.61 (Hb-SS disease w/o crisis) and 282.62 (Hb-SS disease with crisis). The ICD-10-CM codes for HbSS-related healthcare encounters are as follows: D57.1 (Hb-SS disease without crisis), D57.00 (Hb-SS disease with crisis, unspecified); D57.01 (Hb-SS disease with acute chest syndrome); and D57.02 (Hb-SS disease with splenic sequestration). Children ages 2 through 15 years are included within the target population (i.e., must not have a 2nd or 16th birthday within the measurement year). It is important to note that accurate calculation of this measure requires that the target population be selected from among children who have all of their health services for the measurement year included in the administrative claims data set. For children who have dual enrollment in other health plans, their claims may not be complete since some of their health services may have been paid for by another health plan. Inclusion of children with other health insurance would potentially cause this measure to be understated. As a consequence, this measure requires that children must not only be continuously enrolled within the health plan from which claims are available, the enrollment files must also be assessed to determine whether other forms of health insurance existed during the measurement year. Children with evidence of other insurance during the measurement year (i.e., coordination of benefits) are excluded from the target population.

EXCLUSIONS

There are no denominator exclusions.

EXCLUSION DETAILS

N/A

RISK ADJUSTMENT

No additional risk adjustment analysis included

No risk adjustment or stratification

STRATIFICATION

N/A

TYPE SCORE

Rate/proportion
Better quality = Higher score

### ALGORITHM

1. Identify the denominator: Determine the eligible population using administrative claims. The eligible population is all individuals who satisfy all specified criteria, including age, continuous enrollment, and diagnosis requirements within the measurement year.
2. Identify the numerator: Identify numerator events using administrative claims for all individuals in the eligible population (denominator) within the measurement year.
3. Calculate the rate (numerator / denominator).

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## NQF #3294 STS Lobectomy for Lung Cancer Composite Score

### STEWARD

The Society of Thoracic Surgeons

### DESCRIPTION

The STS Lobectomy Composite Score comprises two domains:

1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure)
2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room.

The composite score is created by a weighted combination of the above two domains resulting in a single composite score. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following:

1 star: lower-than expected performance

2 stars: as-expected-performance

3 start: higher-than-expected-performance

TYPE

Composite

DATA SOURCE

Other, Registry Data

Other, Registry Data

LEVEL

Facility

SETTING

Inpatient/Hospital

NUMERATOR STATEMENT

The STS Lobectomy Composite Score comprises two domains:

1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure)
2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room.

The composite score is created by a weighted combination of the above two domains resulting in a single composite score. Operative mortality and major complications were weighted inversely by their respective standard deviations across participants. This procedure is equivalent to first rescaling mortality and complications by their respective standard deviations and then assigning equal weighting to the rescaled mortality rate and rescaled complication rate. This is the same methodology used for other STS composite measures.

In addition to receiving a numeric score, participants are assigned to rating categories designated by the following:

1 star: lower-than expected performance

2 stars: as-expected-performance

3 start: higher-than-expected-performance

Patient Population: The STS GTSD was queried for all patients treated with lobectomy for lung cancer between January 1, 2014, and December 31, 2016. We excluded patients with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status.

Time Window: 01/01/2014 - 12/31/2016

Model variables: Variables in the model: age, sex, year of operation, body mass index, hypertension, steroid therapy, congestive heart failure, coronary artery disease, peripheral

vascular disease, reoperation, preoperative chemotherapy within 6 months, cerebrovascular disease, diabetes mellitus, renal failure, dialysis, past smoker, current smoker, forced expiratory volume in 1 second percent of predicted, Zubrod score (linear plus quadratic), American Society of Anesthesiologists class (linear plus quadratic), and pathologic stage.

### NUMERATOR DETAILS

Number of patients undergoing elective lobectomy for lung cancer for whom:

1. Postoperative events (POEvents - STS GTS Database, v 2.2, sequence number 1710) is marked “Yes” and one of the following items is marked:

a. Reintubation (Reintube - STS GTS Database, v 2.2, sequence number 1850)
b. Need for tracheostomy (Trach - STS GTS Database, v 2.2, sequence number 1860)
c. Initial ventilator support > 48 hours (Vent- STS GTS Database, v 2.2, sequence number 1840)
d. Acute Respiratory Distress Syndrome (ARDS - STS GTS Database, v 2.2, sequence number 1790)
e. Pneumonia (Pneumonia - STS GTS Database, v 2.2, sequence number 1780)
f. Pulmonary Embolus (PE - STS GTS Database, v 2.2, sequence number 1820)
g. Bronchopleural Fistula (Bronchopleural - STS GTS Database, v 2.2, sequence number 1810)
h. Myocardial infarction (MI - STS GTS Database, v 2.2, sequence number 1900)

Or

2. Unexpected return to the operating room (ReturnOR - STS GTS Database, Version 2.2, sequence number 1720) is marked “yes”

Or

3. One of the following fields is marked “dead”
    a. Discharge status (MtDCStat - STS GTS Database, Version 2.2, sequence number 2200);
    b. Status at 30 days after surgery (Mt30Stat - STS GTS Database, Version 2.2, sequence number 2240)

Please see STS General Thoracic Surgery Database Data Collection Form, Version 2.3- http://www.sts.org/sites/default/files/documents/STSThoracicDCF_V2_3_MajorProc_Annotated.pdf

### DENOMINATOR STATEMENT

Number of patients greater than or equal to 18 years of age undergoing elective lobectomy for lung cancer

### DENOMINATOR DETAILS

1. Lung cancer (LungCancer - STS GTS Database, v 2.2, sequence number 830) is marked “yes” and Category of Disease – Primary (CategoryPrim - STS GTS Database, v 2.2, sequence number 1300) is marked as one of the following:

   (ICD-9, ICD-10)

   Lung cancer, main bronchus, carina (162.2, C34.00)

   Lung cancer, upper lobe (162.3, C34.10)

   Lung cancer, middle lobe (162.4, C34.2)

   Lung cancer, lower lobe (162.5, C34.30)

   Lung cancer, location unspecified (162.9, C34.90)

2. Patient has lung cancer (as defined in #1 above) and primary procedure is one of the following CPT codes:

   Thoracoscopy, surgical; with lobectomy (32663)

   Removal of lung, single lobe (lobectomy) (32480)

3. Status of Operation (Status - STS General Thoracic Surgery Database, Version 2.2, sequence number 1420) is marked as “Elective”

4. Only analyze the first operation of the hospitalization meeting criteria 1-3

EXCLUSIONS

Patients were excluded with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status.

EXCLUSION DETAILS

Cases removed from calculations if Emergent, Urgent, or Palliative is checked under "Status of Operation" OR if T0 is checked under Pathological Staging of the Lung / Lung Tumor: PathStageLungT(1540) OR if VI is checked under ASA Classification: ASA (1470) Only general thoracic procedures coded as primary lung or primary esophageal cancer are included in measure calculations, so occult carcinoma is effectively excluded.

RISK ADJUSTMENT

No additional risk adjustment analysis included

Statistical risk model with risk factors (specify number of risk factors)

Participant-specific risk-adjusted operative mortality and major complication rates were estimated using a bivariate random-effects logistic regression model. The term bivariate refers to the fact that both operative mortality and major complications were analyzed together in a single model, not estimated one at a time in separate models. Random-effects refers to the assumption that the provider-specific parameters of interest are assumed to arise from a specified distribution defined by parameters that are also estimated in the modelling process. Detailed description is provided in published statistical appendix; a copy is appended to the end of this document. Risk factors in the model were: age, sex, year of operation, body mass index, hypertension, steroid therapy, congestive heart failure, coronary artery disease, peripheral vascular disease, reoperation, preoperative chemotherapy within 6 months, cerebrovascular disease, diabetes mellitus, renal failure, dialysis, past smoker, current smoker, forced expiratory volume in 1 second percent of predicted, Zubrod score (linear plus quadratic), American Society of Anesthesiologists class (linear plus quadratic), and pathologic stage.

STRATIFICATION

N/A

TYPE SCORE

Rate/proportion

Better quality = Lower score

ALGORITHM

Target population is patients treated with lobectomy for lung cancer. Patients were excluded with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status. Outcomes were measured in two domains:

1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure)
2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room.

Time window for analysis was between 01/01/2014 and 12/31/2016.

Analysis considered 24,912 patient records across 233 participant sites.

To form the composite, we rescaled the major complication and operative mortality domains by dividing by their respective standard deviations across STS participants and then added the two domains together. This weighting was then assessed by an expert panel to determine if it provided an appropriate reflection of the relative importance of the two domains.

After rescaling, the relative weights in the final composite of risk-standardized mortality and risk-standardized major morbidity were 0.827 and 0.173, respectively. An implication of this weighting is that a 1 percentage point change in a participant´s risk-adjusted mortality rate has the same impact as a 4.8 percentage point change in the site´s risk-adjusted morbidity rate. Our expert panel concurred that this weighting was consistent with their clinical assessment of each domain's relative importance.

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N/A
N/A

## NQF #0729 Optimal Diabetes Care

STEWARD

MN Community Measurement

DESCRIPTION

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

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

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

TYPE

Composite

DATA SOURCE

Electronic Health Records
Electronic Health Records

LEVEL

Clinician: Group/Practice

SETTING

Outpatient Services

NUMERATOR STATEMENT

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

- The most recent HbA1c in the measurement period has a value less than 8.0 mg/dL
- The most recent Blood Pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg
- On a statin medication, unless allowed contraindications or exceptions are present

- Patient is not a tobacco user
- Patient with ischemic vascular disease (Ischemic Vascular Disease Value Set) is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present

NUMERATOR DETAILS

Please note that while the all-or-none composite measure is considered to be the gold standard, reflecting best patient outcomes, the individual components may be measured as well. This is particularly helpful in quality improvement efforts to better understand where opportunities exist in moving the patients toward achieving all of the desired outcomes. Please refer to the additional numerator logic provided for each component and note that all of the denominator criteria apply to the numerator as well, but are not repeated in the numerator codes/ descriptions.HbA1c Date [Date (mm/dd/yyyy)] ANDHbA1c Value [Numeric]Numerator component calculation: numerator component compliant is HbA1c during the last 12 months (measurement year) AND most recent HbA1c value is less than 8.0.Enter the date of the most recent HbA1c test during the measurement period.Enter the value of the most recent HbA1c test during the measurement period.Leave BLANK if an HbA1c was never performed.• A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.• If the HbA1c result is too high to calculate, still enter the HbA1c test date if it is the most recent test result during the measurement period.Blood Pressure Date [Date (mm/dd/yyyy)] ANDBP Systolic [Numeric] ANDBP Diastolic [Numeric]Numerator component calculation: numerator component compliant is BP during the measurement year AND Systolic < 140 AND Diastolic < 90.Enter the date of the most recent blood pressure result during the measurement period.Leave BLANK if a blood pressure was not obtained during the measurement period.• A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result during the measurement period.• Blood pressures that are taken by the patient on a digital device in the context of a virtual (online or telephone) visit are acceptable.• Do not include BP readings:o Taken during an acute inpatient stay or an ED visit.o Taken during an outpatient visit which was for the sole purpose of having a diagnostic test or surgical procedure performed.o Obtained the same day as a major diagnostic or surgical procedure.BP SystolicEnter the value of the most recent systolic blood pressure result during the measurement period.If more than one value is recorded on the most recent date, the lowest systolic value from multiple readings on the same date may be submitted.NOTE: The systolic blood pressure is the upper number in the recorded fraction. For example, the systolic value for a blood pressure of 124/72 mmHg is 124.BP DiastolicEnter the value of the most recent diastolic blood pressure result during the measurement period.If more than one value is recorded on the most recent date, the lowest diastolic value from multiple readings on the same date may be submitted.• NOTE: The diastolic blood pressure is the lower number in the recorded fraction. For example, the diastolic value for a blood pressure of 124/72 mmHg is 72.LDL Date [Date (mm/dd/yyyy)] ANDLDL Value [Numeric]Numerator component calculation: Is used for the cholesterol component for statin use; patients with low untreated LDL values may not be appropriate for the initiation of statin medication.Enter the date of the most recent LDL test on or prior to the end of the measurement period.Leave BLANK if an LDL was never performed.• A test result from a provider outside of the reporting medical group is allowed if the result is documented in the reporting medical group's patient record and is the most recent test result within the allowable time period.• If the LDL result is too high to calculate, still enter the LDL test date if it is the most recent test result within the allowable time period.LDL values within the last five years will be used to calculate potential exceptions to being on a statin medication. Leave BLANK if an LDL test was not performed between 01/01/201x and 12/31/201x (five-year increments).Statin Medication [Numeric] ANDStatin Medication Date [Date (mm/dd/yyyy)] AND/ORStation Medication Exception [Numeric] ANDStation Medication Exception Date [Date (mm/dd/yyyy)]Numerator component calculation: numerator component compliant if on a statin (prescribed/ ordered) or low LDL value (see above) or documented contraindication/exception is present.Statin Medication:Enter the code that corresponds to whether the patient was prescribed a statin medication or if a statin medication was active on

the patient's medication list during the measurement period.Please refer to Appendix C for a list of statin medications.1 = Yes, patient was prescribed a statin medication or a statin medication was indicated as active on the patient's medication list during the measurement period.2 = No, patient was not prescribed a statin medication and a statin medication was not indicated as active on the patient's medication list during the measurement period.The following exceptions to statin medication use will be identified by the Data Portal based on the submitted LDL values:• Patients with ischemic vascular disease aged 21 to 75 years and an LDL result less than 40 mg/dL• Patients aged 40 – 75 years with an LDL result less than 70 mg/dL• Patients aged 21 – 39 years with an LDL less than 190 mg/dLStatin Medication Date:Enter the most recent date of a statin prescription, order or review of active medications list during the measurement period.If no statin prescribed, ordered, or reviewed as an active medication during the measurement period, leave blankStatin Medication Exception:If the patient was NOT prescribed or did not have a statin medication active on their medication list during the measurement period, enter the value that corresponds to any of the following contraindications or exceptions:1 = Pregnancy at any time during the measurement period2 = Active liver disease (liver failure, cirrhosis, hepatitis)3 = Rhabdomyolysis4 = End stage renal disease on dialysis5 = Heart failure8 = Allergy to statin9 = 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 = Intolerance using Intolerance (CHOL-06) or Myopathy and Myositis (CHOL-05) Value Sets to document intolerance to statins.If none of the above contraindications or exceptions are documented, leave BLANK. NOTE: Items 1 – 5 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: Pregnancy V/Z Codes (PREG-01), Pregnancy Diagnosis Codes (PREG-02), Liver Disease (CHOL-01), Rhabdomyolysis (CHOL-02), ESRD on Dialysis (CHOL-03), and Heart Failure (CHOL-04)Statin Medication Exception Date:If the patient has a documented contraindication or exception enter the date of the contraindication or exception. If only the month and year are known, enter the first day of the month.Tobacco Status Documentation Date [Date (mm/dd/yyyy)] ANDTobacco Status [Numeric]Numerator component calculation: numerator component compliant if tobacco status within the last two years and status is tobacco-free.Tobacco Status Documentation Date:Enter the most recent date that the patient's tobacco status was documented during the measurement period or year prior.• If the patient's tobacco status is not documented or the date of documentation cannot be determined, leave BLANKTobacco 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 documentation3 = Current tobacco user (tobacco includes any amount of cigarettes, cigars, pipes or smokeless tobacco)• If the date of the tobacco status documentation is not documented in the patient record, enter 2• E-cigarettes are not considered tobacco products.Aspirin or Anti-platelet Medication [Numeric] ANDAspirin or Anti-platelet Date [Date (mm/dd/yyyy)] AND/ORAspirin or Anti-platelet Exception [Numeric] ANDAspirin or Anti-platelet Exception Date [Date (mm/dd/yyyy)]Numerator component calculation: Calculation applied only if patient has ischemic vascular disease (IVD); if no IVD indicated, is a numerator component "free-pass". For patients with IVD, numerator component compliant if indicated on daily aspirin or anti-platelet medication (prescribed/ ordered) or documented contraindication/exception is present.Aspirin or Anti-platelet Medication:For patients with Ischemic Vascular Disease (IVD), enter the code that corresponds to whether the patient is prescribed a daily aspirin product or antiplatelet medication or if an aspirin product or anti-platelet medication was active on the patient's medication list during the measurement period.Please see Appendix D for methods to identify appropriate aspirin products or antiplatelet medications.1 = Yes, patient was prescribed a daily aspirin product or antiplatelet medication, or one was indicated as active on the patient's medication list during the measurement period.2 = No, patient was not prescribed a daily aspirin product or antiplatelet medication and one was not indicated as active on the patient's medication list during the measurement period.Aspirin/narcotic combination medications do not qualify as a daily aspirin product.Aspirin or Anti-platelet Date:For patients with IVD, enter the date of the most recent daily aspirin product or anti-platelet medication prescription, order or review of an active medication list that included a daily aspirin product or anti-platelet

medication during the measurement period.If a daily aspirin product or anti-platelet medication was not prescribed, ordered or reviewed as an active medication during the measurement period leave blankAspirin or Anti-platelet Medication Exception:For patients with IVD who were not prescribed or taking a daily aspirin product or anti-platelet medication during the measurement period, enter the code that corresponds to any of the following contraindications or exceptions:1 = Prescribed anti-coagulant medication during the measurement period2 = History of gastrointestinal bleeding3 = History of intracranial bleeding4 = Bleeding disorder5 = Allergy to aspirin or anti-plateletsIf none of the above contraindications or exceptions are documented, leave BLANK.NOTE: Items 2 and 3 above can be defined by diagnosis codes that may be used in data collection. Value Sets include: GI Bleed (ASA-01) and Intracranial Bleed (ASA-02).Aspirin or Anti-platelet Medication Exception Date:If the patient has a documented aspirin product or anti-platelet medication exception enter the date of the contraindication or exception.

### DENOMINATOR STATEMENT

Patients ages 18 to 75 with a diagnosis of diabetes (Diabetes Value Set) with any contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND problem list must be queried for diagnosis (Diabetes Value Set). AND patient has at least one established patient office or telehealth visit (Established Pt Diabetes Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement period.

### DENOMINATOR DETAILS

Please also refer to all code lists included in the data dictionary attached in S.2b.• 18 years or older at the start of the measurement period AND less than 76 years at the end of the measurement period• Patient had a diagnosis of diabetes (Diabetes Value Set) with any contact during the current or prior measurement period OR had diabetes (Diabetes Value Set) present on an active problem list at any time during the measurement period. Both contacts AND the active problem list must be queried for diagnosis (Diabetes Value Set).• At least one established patient office or telehealth visit (Established Pt Diabetes & Vasc Value Set) performed or supervised by an eligible provider in an eligible specialty for any reason during the measurement periodEligible specialties: Family Medicine, Internal Medicine, Geriatric Medicine, EndocrinologyEligible providers: Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurses (APRN)

### EXCLUSIONS

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

### EXCLUSION DETAILS

- Patient was pregnant (<i>Diabetes with Pregnancy Value Set) at any time during the measurement period
- Patient was a permanent nursing home resident during the measurement period
- Patient was in hospice or palliative care at any time during the measurement period
- Patient died prior to the end of the measurement period

### RISK ADJUSTMENT

No additional risk adjustment analysis included

Statistical risk model with risk factors (specify number of risk factors)

Risk factors are

- patient age (continuous variable)
- insurance product (proxy for socioeconomic status)
- diabetes type (1, 2 or unknown)
- 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 childSince 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
- diabetes type as a categorical variable including type 1, type 2 and unknown diabetes type, type 2 is the reference group
- 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.

STRATIFICATION

The diabetes population is not currently stratified when publicly reported on our consumer website, MN HealthScores. The data is, however, stratified by public (MN Health Care Programs-Prepaid Medical Assistance including dual eligibles, MinnesotaCare, and General Assistance Medical Care) and private purchasers for our 2020 Health Care Disparities Report. This report notes a gap in outcomes of 11.4% percentage points between patients with diabetes in public programs and other purchasers. However, trend reporting indicates that the gap is starting to narrow.
https://mncmsecure.org/website/Reports/Community%20Reports/Disparities%20by%20Insurance%20Type/2020%20RY%20Disparities%20by%20Insurance%20Type.pdf

TYPE SCORE

Rate/proportion
Better quality = Higher score

ALGORITHM

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N/A

# Appendix E: Related and Competing Measures

## Comparison of NQF #3668 and NQF #3559

### Steward/Developer

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Albert Einstein College of Medicine

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Albert Einstein College of Medicine

### Description

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

This process measure seeks to capture follow up after asthma-related emergency department (ED) visits for children with asthma after discharge from the ED, as recommended by the NHLBI 2007 guidelines. This measure assesses the percentage of asthma-related ED visits for children ages 3-21 with a follow-up visit with a primary care clinician or an asthma subspecialist within 14 days of discharge from the ED, within the reporting year, for patients who are enrolled in the health plan for two consecutive months following the ED visit.

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

This measure estimates the rate of emergency department visits for children ages 3 – 21 who are being managed for identifiable asthma, using specified definitions. The measure is reported in visits per 100 child-years.

The rate construction of the measure makes it a more actionable measure compared to a more traditional quality measure percentage construct (e.g., percentage of patients with at least one asthma-related ED visit). The rate construction means that a plan can improve on performance either through improvement efforts targeting all patients with asthma, or through efforts targeted at high-utilizers, since all visits are counted in the numerator. For a percentage measure, efforts to address high-utilizers will be less influential on performance and potentially have no effect at all even if a high utilizer goes from 8 visits a year to 1, since in order to improve performance, a high-utilizer has to get down to zero visits.

This measure was developed under the Pediatric Quality Measurement Program, funded by the Centers for Medicare and Medicaid Services and administered by the Agency for Healthcare Research and Quality. https://www.ahrq.gov/pqmp/about/what-is-pqmp.html

### Numerator

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

The numerator assesses whether there was a follow-up visit within 14 days to a primary care or asthma-specific subspecialty provider.

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Number of asthma-related ED visits

**Denominator**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Children 3-21 years of age with an asthma-related ED visit (primary or second diagnosis (in the second diagnostic spot) of asthma) during the measurement year, with at least 2 months of insurance enrollment after the ED visit.

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

100 Child Years for children with identifiable asthma

**Measure Type**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Process

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Outcome

**Data Source**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Claims

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Claims

**Target Population**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Children (Age < 18)

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

**Care Setting**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Ambulatory Care

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Outpatient Services

**Level of Analysis**

NQF #3668 FOLLOW-UP AFTER EMERGENCY DEPARTMENT VISITS FOR ASTHMA

Health Plan

NQF #3599 PEDIATRIC ASTHMA EMERGENCY DEPARTMENT USE

Health Plan

## Comparison of NQF #2797 and NQF #3166

**Steward/Developer**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Q-METRIC – The University of Michigan

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

Q-METRIC – The University of Michigan

**Description**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The percentage of children ages 2 through 15 years old with sickle cell anemia (Hemoglobin SS) who received at least one transcranial Doppler (TCD) screening within a year.

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

The percentage of children ages 3 months to 5 years old with sickle cell anemia (SCA) who were dispensed appropriate antibiotic prophylaxis for at least 300 days within the measurement year.

**Numerator**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The numerator is the number of children ages 2 through 15 years old with sickle cell anemia who received at least one TCD screening within the measurement year.

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

The numerator is the number of children ages 3 months to 5 years old with SCA who were dispensed appropriate antibiotic prophylaxis for at least 300 days within the measurement year.

**Denominator**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The denominator is the number of children ages 2 through 15 years with sickle cell anemia within the measurement year.

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

The denominator is the number of children ages 3 months to 5 years with sickle cell anemia (SCA) within the measurement year.

**Measure Type**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Process

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

Process

**Data Source**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Claims

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

Claims

**Target Population**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Children (Age < 18)

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

**Care Setting**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Outpatient Services, Other

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

Other

**Level of Analysis**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Health Plan

NQF #3166 ANTIBIOTIC PROPHYLAXIS AMONG CHILDREN WITH SICKLE CELL ANEMIA

Health Plan

## Comparison of NQF #2797 and NQF #3595

**Steward/Developer**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Q-METRIC – The University of Michigan

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

University of Michigan

**Description**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The percentage of children ages 2 through 15 years old with sickle cell anemia (Hemoglobin SS) who received at least one transcranial Doppler (TCD) screening within a year.

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

The percentage of children ages 1 to 18 years with sickle cell anemia (SCA) who were dispensed hydroxyurea for at least 300 days within the measurement year.

**Numerator**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The numerator is the number of children ages 2 through 15 years old with sickle cell anemia who received at least one TCD screening within the measurement year.

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

The number of children ages 1 to 18 years with sickle cell anemia (SCA) who were dispensed hydroxyurea for at least 300 days within the measurement year.

**Denominator**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

The denominator is the number of children ages 2 through 15 years with sickle cell anemia within the measurement year.

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

The number of children ages 1 to 18 years with sickle cell anemia (SCA) within the measurement year.

**Measure Type**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Process

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

Process

**Data Source**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Claims

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

Claims

**Target Population**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Children (Age < 18)

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

**Care Setting**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Outpatient Services, Other

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

Other

**Level of Analysis**

NQF #2797 TRANSCRANIAL DOPPLER ULTRASONOGRAPHY SCREENING AMONG CHILDREN WITH SICKLE CELL ANEMIA

Health Plan

NQF #3595 HYDROXYUREA USE AMONG CHILDREN WITH SICKLE CELL ANEMIA

Health Plan

## Comparison of NQF #0729 and NQF #0061

### Steward/Developer

NQF #0729 OPTIMAL DIABETES CARE

MN Community Measurement

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

National Committee for Quality Assurance

### Description

NQF #0729 OPTIMAL DIABETES CARE

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

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

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

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

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

### Numerator

NQF #0729 OPTIMAL DIABETES CARE

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

- The most recent HbA1c in the measurement period has a value less than 8.0 mg/dL
- The most recent Blood Pressure in the measurement period has a systolic value of less than 140 mmHg AND a diastolic value of less than 90 mmHg
- On a statin medication, unless allowed contraindications or exceptions are present
- Patient is not a tobacco user
- Patient with ischemic vascular disease (Ischemic Vascular Disease Value Set) is on daily aspirin or anti-platelets, unless allowed contraindications or exceptions are present

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

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

**Denominator**

NQF #0729 OPTIMAL DIABETES CARE

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

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

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

**Measure Type**

NQF #0729 OPTIMAL DIABETES CARE

Composite

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

Outcome: Intermediate Clinical Outcome

**Data Source**

NQF #0729 OPTIMAL DIABETES CARE

Electronic Health Records

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

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

**Target Population**

NQF #0729 OPTIMAL DIABETES CARE

Adults (Age >= 18)

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

Populations at Risk

**Care Setting**

NQF #0729 OPTIMAL DIABETES CARE

Outpatient Services

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

Outpatient Services

**Level of Analysis**

NQF #0729 OPTIMAL DIABETES CARE

Clinician: Group/Practice

NQF #0061 COMPREHENSIVE DIABETES CARE: BLOOD PRESSURE CONTROL (140/90 MM HG)

Health Plan

## Appendix F: Pre-Evaluation Comments

No comments were received during the pre-evaluation public commenting period.

# Appendix G: Post-Evaluation Comments

## NQF #0729 Optimal Diabetes Care (Endorsed)

*Cindy Lemek, Wound Ostomy Continence Nursing Certification Board; Submitted by Cindy Lemek*

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**Council / Public:** HPR

**Level of Support:** N/A

### Comment

The Wound Ostomy Continence Nursing Certification Board (WOCNCB®) is pleased to make comment regarding the NQF Measure Number 0729 Optimal Diabetes Care. Founded in 1978, the WOCNCB® is a non-profit professional, international nursing organization certifying more than 9,000 registered nurses who are specialists in the fields of wound, ostomy, continence, and foot care. As such, please find the following comments regarding optimal diabetes care and the prevention of diabetic foot ulcers. Diabetes is the most common cause of peripheral neuropathy, which can lead to foot ulceration and potentially an amputation. “Every year, more than one million people with diabetes mellitus (DM) suffer limb loss, and approximately 80% of DM-related lower extremity amputations (LEAs) are proceeded by a foot ulcer” (2021 Guideline, JWCON pg.267). Diabetic foot ulcers (DFU) and amputations not only lead to significant patient morbidity and mortality but also considerable financial burden on the health care system. It is estimated that the cost of managing patients with DFUs ranges from 9-13 billion dollars a year (Raghav, Khan, Labala, Ahmad, Noor & Mishra, 2018). Prevention of DFUs begins in the primary care setting. Early detection of the risk for DFUs in conjunction with patient education will decrease morbidity, foot ulceration, and the need for lower limb amputations. (Ahmad, Asif, Saleem, Majeed & Bint-E-Athar 2017). Primary care interventions to prevent diabetic foot ulcers and amputations may include routine foot screening and inspection, assessing for appropriate footwear, ordering specialized shoes when necessary, and providing the patient with education on prevention of foot ulcers. Patient education includes the need for daily self-foot inspection, never walking barefoot, seeking professional callus care, wearing appropriate shoes, proper skin and nail care, testing water temperature before use, and seeking care when changes in the feet arise. WOCNCB is dedicated to promoting excellence in wound, ostomy, continence, and foot care nursing. We strongly recommend that the NQF add prevention of diabetic foot ulcers to the measure description. Thank you for your consideration. References: 1. Ahmad, A., Asif, K., Saleem, M., Majeed, H. A., & Bint-E-Athar, H. (2017). A study of risk factors of diabetic foot ulcers. Pakistan Journal of Medical & Health Services, 11(1), 174–176. 2. 2021 Guideline for Management of Patients with Lower-Extremity Wounds Due to Diabetes Mellitus and/or Neuropathic Disease: An Executive Summary. Journal of Wound, Ostomy and Continence Nursing: May/June 2022 - Volume 49 - Issue 3 - p E5 3. Raghav, A., Khan, Z. A., Labala, R. K., Ahmad, J., Noor, S., & Mishra, B. K. (2018). Financial burden of diabetic foot ulcers to world: a progressive topic to discuss always. Therapeutic advances in endocrinology and metabolism, 9(1), 29–31. https://doi.org/10.1177/2042018817744513

### Developer Response

Thank you for your comment! MNCM agrees that promoting daily foot care and assessment by providers is an important part of preventing diabetic foot ulcers and lower extremity amputation. Our diabetes composite measure does not contain a process measure component for foot exam; however, it does contain a very important intermediate outcome related to long term microvascular complications-hemoglobin A1c control. Glycemic control is one of the best tools to prevent or significantly delay problems with peripheral neuropathy and peripheral vasculature. There is another NQF endorsed measure specifically related to diabetes foot exam, NQF # 0056 Diabetes Foot Exam stewarded by the National Committee for Quality Assurance that can be utilized. The denominator for the measure is: Patients 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year. The numerator is: Patients who received a foot exam (visual inspection and sensory exam with monofilament and pulse exam) during the measurement period. Collette Cole, RN BSN CPHQ Clinical Measure Developer MN Community Measurement

### NQF Response

Thank you for your comment. It has been shared with the Standing Committee and the measure developer.

### NQF Committee Response

N/A

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