# Neurological Conditions 2015-2016

DRAFT REPORT FOR COMMENT

May 12, 2016

NATIONAL QUALITY FORUM

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# Neurological Conditions

DRAFT REPORT

## Executive Summary

Neurological conditions and injuries affect millions of Americans each year, taking a tremendous toll on patients, families, and caregivers. For example, strokes are the fifth leading cause of death in the United States and cost billions of dollars in treatment, rehabilitation and lost wages. [1] Similarly, Alzheimer's disease, the most common form of dementia, was the fifth leading cause of death for adults aged 65 to 85, with costs expected to rise to nearly $500 billion annually by 2040.[2] Over five million people have epilepsy, with costs exceeding $15 billion annually.[3] Finally, headaches are one of most common disorders of the nervous system and are typically treated with opioids that have potentially adverse effects for the patient.[4,5]

The Neurology portfolio currently has 15 endorsed measures for neurological conditions addressing diagnosis, treatments and procedures. The portfolio contains 11 measures for stroke, one for epilepsy, and three for dementia. Appendix B details the full portfolio of neurological measures. The Neurology Standing Committee identified several gap areas during the April 4-5, 2016 in-person meeting.

For this project, the Committee evaluated a total of 26 measures against NQF's evaluation criteria—14 new measures and 12 measures undergoing maintenance review. Nine measures were recommended for endorsement, one eMeasure was recommended for approval for trial use, four measures were recommended for inactive endorsement with reserve status, and six were not recommended for endorsement. The Committee did not reach consensus on four measures, and deferred voting on two measures.

The measures recommended for endorsement by the Standing Committee are:

- #0437 STK 04: Thrombolytic Therapy
- #0507 Diagnostic Imaging Stenosis Measurement in Carotid Imaging Reports
- #0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival
- #1952 Time to Intravenous Thrombolytic Therapy
- #2111 Antipsychotic Use in Persons with Dementia
- #2863 CSTK 06: Nimodipine Treatment Administered
- #2864 CSTK 01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients
- #2866 CSTK 03: Severity Measurement Performed for Subarachnoid Hemorrhage and Intracerebral Hemorrhage Patients
- #2877 Hybrid, Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity

The following measure was recommended for approval for trial use:

- #2872 Dementia-Cognitive Assessment

Four measures were recommended for Inactive Endorsement with Reserve Status:

- #0435 STK 02: Discharged on Antithrombotic Therapy
- #0436 STK 03: Anticoagulation Therapy for Atrial Fibrillation/Flutter
- #0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two
- #0441 STK 10: Assessed for Rehabilitation

The Committee did not reach consensus on the following measures:

- #0434 STK 01: Venous Thromboembolism (VTE) Prophylaxis
- #1814 Counseling for Women of Childbearing Potential with Epilepsy (eMeasure)
- #2834 STK 04: Thrombolytic Therapy (eMeasure)
- #2876 Hospital 30-day, all-cause, risk standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity

The Committee deferred voting on the following measures:

- #0439 STK 06: Discharged on Statin Medication
- #2836 STK 06: Discharged on Statin Medication (eMeasure)

The Committee did not recommend the following measures:

- #2832 STK 02: Discharged on Antithrombotic Therapy (eMeasure)
- #2833 STK 03: Anticoagulation Therapy for Atrial Fibrillation/Flutter (eMeasure)
- #2835 STK 05: Antithrombotic Therapy by End of Hospital Day Two (eMeasure)
- #2837 STK 10: Assessed for Rehabilitation (eMeasure)
- #2865 CSTK 01: Modified Rankin Score (mRS) at 90 Days
- #2870 Overuse of Opioid Containing Medications for Primary Headache Disorders (trial use)

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

## Introduction

Neurological conditions and injuries affect millions of Americans each year and take a tremendous toll on patients, families, and caregivers. Additionally, billions of dollars are spent on treatment, rehabilitation, and lost or reduced earnings. Specifically:

- Strokes are the fifth leading cause of death in the United States as well as a leading cause of disability. Each year, approximately 795,000 people suffer a stroke. Healthcare costs of stroke, including medications and missed days of work, are estimated at $34 billion annually. [6]
- Alzheimer's disease is the most common form of dementia with an estimated five million Americans living with the disease. An estimated 14 million people will have Alzheimer's by 2050. In 2009, Alzheimer's disease was the fifth leading cause of death for adults ages 65 and older. In 2010, cost for Alzheimer's disease reached nearly $215 billion, and is projected to rise to more than $500 billion annually by 2040.[7]
- Epilepsy affects over five million Americans and is estimated to cost $15.5 billion each year in medical costs and lost or reduced earnings and production.[8]
- Headache disorders are one of the most common disorders of the nervous system.[9] While other classes of medications are considered first line of treatment for migraines, opioids are typically used. Common adverse effects of using opioids include tolerance, dependence and addiction, which in turn have a negative impact on patients, families and communities.[10]

This NQF project aimed to evaluate performance measures that will help guide quality improvement in the care and treatment of neurological conditions. On April 4-5, 2016, NQF convened a new multi-stakeholder Neurology Standing Committee composed of 23 individuals to evaluate 12 NQF-endorsed measures due for maintenance review and 14 new measures related to the quality of neurological care.

## NQF Portfolio of Performance Measures for Neurological Conditions

The Neurology Standing Committee oversees NQF's portfolio of neurology measures that include measures for stroke, dementia, epilepsy, and headache (see Appendix B). This portfolio contains 15 measures: 14 process measures and one outcome measure (see table below).

**Table 1. NQF Neurology Portfolio of Measures**

| Sub-Topic | Process | Outcome/Resource Use |
|---|---|---|
| **Stroke** | 10 | 1 |
| **Dementia** | 3 | -- |
| **Epilepsy** | 1 | -- |
| ***Total*** | 14 | 1 |

While most of these measures are part of this Committee's purview, other measures related to neurological conditions can be found in other portfolios including Patient Safety, Cardiovascular, Endocrine, and Surgery.

### *Related and Competing Measures*

The Committee evaluated measures that were considered related and competing on the post in-person meeting call. Related measures are those measures with either the same focus *or* the same target population; competing measures are those both with the same measure focus *and* the same target population. Using NQF guidance for these comparisons, the Committee considered multiple measures to provide feedback to developers on potential harmonization efforts. These details are included in Appendix B.

## National Quality Strategy

NQF-endorsed measures for neurological conditions support the National Quality Strategy (NQS). NQS serves as the overarching framework for guiding and aligning public and private efforts across all levels (local, state, and national) to improve the quality of healthcare in the U.S. The NQS establishes the "triple aim" of better care, affordable care, and healthy people/communities and focuses on six priorities to achieve those aims: *Safety, Person and Family Centered Care, Communication and Care Coordination, Effective Prevention and Treatment of Illness, Best Practices for Healthy Living, and Affordable Care.*

Identifying quality measures for neurological care align with several of the NQS priorities, including:

- **Promoting the most effective prevention and treatment for leading causes of disability and mortality.** Neurological conditions account for a number of the leading causes of death. Stroke is the fifth leading cause of death.[11] Stroke measures in the current portfolio emphasize timely assessment and treatment of stroke patients that can help improve the long-term effects of disability. These measures align with the treatment and prevention of Illness and reduce costs through improving functionality. Moreover, Alzheimer's disease is the most common type of dementia and is the fifth leading cause of death for people aged 65 and older.[12] Three measures in the current portfolio address dementia, helping to ensure diagnosis for this condition and appropriate pharmacological treatment.
- **Ensuring that all persons and families are engaged as partners in care.** Strokes can have devastating effects on quality of life and are one of the leading causes of long-term disability.[13] In the current portfolio, a number of measures aim to prevent the effects of long-term disabilities, while others aim to improve function. One measure supports patient engagement and effective prevention by counseling women of childbearing age about the potential effects of epilepsy and related treatment on contraception and pregnancy.
- **Making care safer**. A number of measures in the Neurology portfolio address key medication safety issues. A dementia measure focuses on appropriate medication prescription to address the overutilization of antipsychotic agents in older adults. A number of stroke measures look at the timeliness of administering intravenous tissue plasminogen activator therapy.

## Use of Measures in the Portfolio

Endorsement of measures by NQF is valued not only because the evaluation process itself is both rigorous and transparent, but also because evaluations are conducted by multistakeholder committees. Committees are comprised of clinicians and other experts from the full range of public and private stakeholders including healthcare providers, employers, health plans, public agencies, community coalitions, and patients—many of whom use measures on a daily basis to ensure better care. Moreover, NQF-endorsed measures undergo routine "maintenance" (i.e., re-evaluation) to ensure that they are still the best available measures and reflect the current science. Federal law also requires that preference be given to NQF-endorsed measures for use in federal public reporting and performance-based payment programs.

Several of the measures in the portfolio are used in hospital accreditation and disease specific care certification programs, and are also included in quality initiatives such as the Centers for Medicare & Medicaid Services (CMS) Hospital Inpatient Quality Reporting Program (IQR) and Physician Quality Reporting System (PQRS). See Appendix C for details of federal program use for the measures in the portfolio. Of the 26 measures in the current portfolio presented to the Committee, 18 are in use in federal programs.

**CMS Hospital Inpatient Quality Reporting Program (IQR) and Medicare and Medicaid Electronic Health Record (EHR) Incentive Program for Hospitals and Critical Access Hospitals (CAHs)**. The IQR program is a pay-for-reporting program providing incentives to hospitals to report designated quality measures to CMS. CMS is aligning the Hospital IQR with the EHR Incentive Programs to allow hospitals to submit unified measures through a single submission method. A subset of the measures collected via the IQR program is publicly reported on the Hospital Compare website.

A number of measures in the Neurology portfolio are included in these programs:

- #0434 STK-01 Venous Thromboembolism (VTE) Prophylaxis);
- #0435 STK 02 Discharged on Antithrombotic (#2832 eMeasure);
- #0436 STK 03 Anticoagulation Therapy for Atrial Fibrillation/Flutter (#2833 eMeasure);
- #0437 STK 04 Thrombolytic Therapy (#2834 eMeasure);
- #0438 STK 05 Antithrombotic Therapy By End of Hospital Day Two (#2835 eMeasure);
- #0439 STK 06 Discharged on Statin Medication ( (#2836 eMeasure); and
- #0441 STK-10 Assessed for Rehabilitation (#2837 eMeasure).

**CMS Hospital Outpatient Quality Reporting Program (OQR).** The OQR program is a pay for quality data reporting program for outpatient hospital services. Some measures collected via OQR are also reported on Hospital Compare. Measure #0661 Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival is part of the Hospital OQR.

**CMS Physician Quality Reporting System (PQRS).** PQRS is a reporting program that uses a combination of incentive payments and payment adjustments to promote reporting of quality information by eligible professionals (EPs). PQRS measures are used for public reporting on the Physician Compare website and

for the quality component of the Value-Based Payment Modifier (VBPM). Measures in the Neurology portfolio included in these programs are:

- #0437 STK 04: Thrombolytic Therapy
- #0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports
- #1814 Counseling for Women of Childbearing Potential with Epilepsy
- #2872 Dementia – Cognitive Assessment

**Medicare and Medicaid EHR Incentive Program for EPs.** This program provides incentive payments to EPs as they adopt, implement, upgrade, or demonstrate meaningful use of certified EHR technology. The EHR Incentive Programs align with the PQRS program to allow individual EPs and groups to report electronic clinical quality measures (eCQMs) through the PQRS portal. Measure #2872 is in use in both PQRS and Meaningful Use Stage 2.

**CMS Medicare Part D Drug Benefit** Measure #2111 Antipsychotic Use in Persons with Dementia is currently in use in CMS in the Medicare Part D patient safety reports.

### *Committee Input on Gaps in the Portfolio*

There are many metrics for quality measurement and improvement but they do not address all priorities. During the evaluation of measures under review, NQF staff described the Neurology portfolio, the current framework of measures, and solicited input from the Committee on gap areas in the portfolio. During their discussions, the Committee identified several areas where additional measure development is needed, including:

- Measures targeting neurological conditions: Parkinson's disease, multiple sclerosis, muscular dystrophy, Alzheimer's disease and dementia;
- Best practices for early diagnosis and treatment of neurological diseases;
- Measures that provide disparities data on disease and treatment to inform patient care;
- Measures for pediatric patients experiencing stoke mimics (e.g., complicated migraines) that may be inappropriately given IV tissue plasminogen activator (tPA) treatment; and
- Patient reported outcomes (PROs).

The Committee acknowledged the evolution of measurement and data systems from paper charts to claims to registries and encourages further development of eMeasures to leverage the use of electronic health records (EHRs).

## Neurology Measure Evaluation

On April 4-5, 2016, the Neurology Standing Committee evaluated 14 new measures and 12 measures undergoing maintenance review against NQF's standard evaluation criteria. To facilitate the evaluation, the Committee and candidate standards were divided into four workgroups for preliminary review prior to consideration by the entire Standing Committee.

## Comments Received Prior to Committee Evaluation

NQF solicits comments on all endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments prior to the evaluation of the measures via an online tool located on the project webpage. For this evaluation cycle, the pre-evaluation comment period was open from February 23 through March 7, 2016. A total of three pre-evaluation comments were received (Appendix G). Comments received were generally in favor of endorsement and harmonization of measures within the portfolio.

All submitted comments were provided to the Committee prior to its initial deliberations during the workgroup calls and the in-person meeting.

## Refining the NQF Measure Evaluation Process

To streamline and improve the periodic evaluation of currently-endorsed measures, NQF has updated the way it re-evaluates measures for maintenance of endorsement. This change took effect beginning October 1, 2015. NQF's endorsement criteria have not changed, and all measures continue to be evaluated using the same criteria. However, under the new approach, there is a shift in emphasis for evaluation of currently-endorsed measures:

- **Evidence:** If the developer attests that the evidence for a measure has not changed since its previous endorsement evaluation, there is a decreased emphasis on evidence, meaning that the Committee may accept the prior evaluation of this criterion without further discussion or need for a vote. This applies only to measures that previously passed the evidence criterion without an exception. If a measure was granted an evidence exception, the evidence for that measure must be revisited.
- **Opportunity for Improvement (Performance Gap):** For re-evaluation of endorsed measures, there is increased emphasis on current performance and opportunity for improvement. Endorsed measures that are "topped out" with little opportunity for further improvement are eligible for Inactive Endorsement with Reserve Status.
- **Reliability:**
    - **Specifications:** There is no change in the evaluation of the current specifications.
    - **Testing:** If the developer has not presented additional testing information, the Committee may accept the prior evaluation of the testing results without further discussion or need for a vote.
- **Validity**: There is less emphasis on this criterion if the developer has not presented additional testing information; the Committee may accept the prior evaluation of this sub-criterion without further discussion and vote. However, the Committee still considers whether the specifications are consistent with the evidence. Also, for outcome measures, the Committee discusses questions required for the Sociodemographic Status (SDS) Trial Period even if no change in testing is presented.
- **Feasibility:** The emphasis on this criterion is the same for both new and previously-endorsed measures, as feasibility issues might have arisen for endorsed measures that have been implemented.
- **Usability and Use:** For re-evaluation of endorsed measures, there is increased emphasis on the use of the measure, especially use for accountability purposes. There also is an increased emphasis on improvement in results over time and on unexpected findings, both positive and

negative.

## Evaluation of eMeasures for Trial Use

The Standing Committee also evaluated two new eMeasures for NQF Approval for Trial Use. NQF Approval for Trial Use is intended for eMeasures that are ready for implementation but cannot be adequately tested to meet NQF endorsement criteria. NQF uses the multistakeholder consensus process to evaluate and approve eMeasures for trial use that address important areas for performance measurement and quality improvement, though they may not have the requisite testing needed for NQF endorsement. These eMeasures must be assessed to be technically acceptable for implementation. The goal for approving eMeasures for trial use is to promote implementation and the ability to conduct more robust reliability and validity testing that can take advantage of clinical data in EHRs.

## Committee Evaluation

Of the 12 maintenance and 14 new measures reviewed by the Neurology Committee at its April 4-5, 2016, meeting, nine are recommended for endorsement, one was recommended for approval for trial use and four for inactive endorsement with reserve status. The Committee did not reach consensus on four measures and did not recommend six measures. The Committee chose to defer voting on two measures. Five previously endorsed measures were withdrawn from consideration (see Appendix A). Table 2 summarizes the results of the Committee's evaluation.

**Table 2. Neurology Measures 2015-2106 Measure Evaluation Summary**

| | Maintenance | New | Total |
|---|---|---|---|
| Measures under consideration | 12 | 14 | 26 |
| Measures recommended for endorsement | 5 | 4 | 9 |
| Measures recommended for inactive endorsement with reserve status | 4 | -- | 4 |
| Measures approved for trial use | -- | 1 | 1 |
| Measures where consensus is not yet reached | 2 | 2 | 4 |
| Measures not recommended for endorsement or trial use | -- | 6 | 6 |
| Measure recommendation deferred | 1 | 1 | 2 |
| Measures withdrawn from consideration | 5 | -- | 5 |
| Reasons for not recommending | Importance – 0<br>Scientific Acceptability – 0<br>Overall – 0 | Importance – 6<br>Scientific Acceptability – 0<br>Overall – 6 | |

## Overarching Issues

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

### *Lack of disparities data*

The Committee noted that several hospital-based measures addressed aspects of care for which there are recognized disparities in care delivery. However, without disparities data for these high performing hospitals, the Committee raised concerns whether there was an opportunity for improvement.

NQF measure evaluation criterion 1b requires that a measure demonstrate a quality problem and opportunity for improvement. A number of issues arose during the Committee's deliberations including measures that appear to be "topped out," (i.e., measures where there is little opportunity for improvement), and the number and representativeness of hospitals included in the measures' performance data. The Committee noted that although the number of hospitals reporting data for these measures has increased significantly over the last five years, the performance results have remained nearly unchanged. The Committee questioned whether the performance data truly represent national performance or are reflective of only a portion of hospitals.

Based on these overarching issues, the Committee recommended four measures for inactive endorsement with reserve status. For two measures, the Committee requested the developers provide updated data on the performance gap and deferred voting on the measure until the post-comment call.

### *Measures currently in use in a federal program: Legacy eMeasures*

Twelve of the 26 measures reviewed in this project were six pairs of an endorsed claims measure with a companion eMeasure. The Committee reviewed the endorsed claims measure first, followed by the eMeasure. Although these measures were evaluated separately, the results of the endorsed claims measures affected the companion eMeasure. For these new companion eMeasures, the data on opportunity for improvement data were the same as the claims measures. When the claims measure did not pass on opportunity for improvement, the eMeasure also did not pass. Ultimately four eMeasures were not recommended for endorsement.

### *Inactive Endorsement with Reserve Status*

The purpose of an inactive endorsement with reserve status is to retain endorsement of reliable and valid performance measure that have overall high levels of performance with little variability. When in reserve status, measure performance may be monitored as necessary to ensure that performance does not decline. Inactive endorsement with reserve status not only retains these measures in the NQF portfolio for periodic monitoring, but also communicates to potential users that the measures no longer address high-leverage areas for accountability purposes. Only currently endorsed measures can qualify for inactive endorsement with reserve status. A measure that does not meet the criterion for opportunity for improvement must meet all the other evaluation criteria in order to be considered for

inactive endorsement with reserve status. Within this project, four measures were recommended for inactive endorsement with reserve status.

### *Insufficient Evidence*

The quantity, quality and consistency of the body of evidence is important in establishing a systematic assessment and grading of the evidence showing that the measure leads to a desired health outcome. For a number of measures in this project, the developer was not able to provide evidence showing a link between the measure focus and the desired outcome. Some evidence presented reflected the impact of the quality problem or evidence about the relationship of particular interventions that were not the focus of the measure or desired outcome. Other developers did not provide sufficient evidence that the process measure was related to an outcome or the evidence presented was not strong enough to support the measure.

For all measures, the Committee discussed whether or not an exception to the evidence was justified. The Committee opted to vote on the evidence exception for two of the measures submitted within this project.

## Summary of Measure Evaluation

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

### *Recommended*

#### 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival (Centers for Medicare & Medicaid Services): Recommended

**Description**: This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the emergency department (ED) within two hours of the onset of symptoms and have a head computed tomography (CT) or magnetic resonance imaging (MRI) scan interpreted within 45 minutes of ED arrival; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Emergency Medical Services/Ambulance, Hospital/Acute Care Facility; **Data Source**: Administrative claims, Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Paper Medical Records

This process measure was originally endorsed in 2011 and is publicly reported in the CMS OQR program. The evidence base derives from the American Heart Association/ American Stroke Association (AHA/ASA) guidelines and focuses on prompt brain imaging before initiating any specific therapy to treat acute ischemic stroke. The Committee discussed the absence of empirical evidence to support the 45 minute time interval and noted that other factors could result in delays in interpreting a CT or MRI scan. The Committee agreed that the measure met the reliability and validity criteria. Upon assessment of feasibility, the Committee expressed concerns about the data collection burden for smaller facilities, but

eventually agreed that this measure was feasible to implement. Overall the Committee agreed the measure met NQF criteria and recommended it for continued endorsement.

### 0437 STK-04: Thrombolytic Therapy (The Joint Commission): Recommended

**Description**: This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

Receiving initial endorsement in 2008 and most recently in 2012, this process measure is currently used in the CMS Hospital Compare and IQR program. The developer presented recent guidelines from the European Cooperative Acute Stroke Study III showing that thrombolytic therapy can be administered effectively up to 4.5 hours after time last know well. The Committee believed that the underlying evidence for the measure had not changed since the last NQF endorsement review and accepted the prior evaluation for this subcriterion. The Committee noted that the measure data reflected an opportunity for improvement. The Committee agreed the measure met the reliability subcriterion but some members questioned the validity of the measure because the developer did not adequately provide criteria and rationale for documenting exclusions for initiating IV thrombolysis. The Committee believed initiation of IV thrombolysis could vary across different facilities. Overall the Committee agreed the measure met NQF criteria and recommended it for continued endorsement.

### 2863 CSTK-06: Nimodipine Treatment Administered (The Joint Commission): Recommended

**Description**: Proportion of subarachnoid hemorrhage (SAH) patients age 18 years and older for whom nimodipine treatment was administered within 24 hours of arrival at this hospital; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical data, Paper Medical Records

This new facility-level measure is currently used in internal quality improvement for Care Certification for Comprehensive Stroke Centers. The measure derives its evidence from the AHA/ASA guidelines supporting the use of nimodipine for SAH to increase the outcome for survival and patient daily independence. Data from 12 sites and 281 medical records found a percent agreement greater than 95% for six numerator data elements, with the exception for the admitting time data element at 82%, which shows a positive correlation. However, some Committee members noted that the exclusion criterion for patients discharged within 24 hours could be viewed as a threat to validity. A Committee member noted that some hospitals would have to complete manual data abstraction. With minimal concerns on the measure, the Committee agreed the measure met NQF criteria and recommended it for endorsement.

### 2864 CSTK-01: National Institutes of Health Stroke Scare (NIHSS) Score Performed for Ischemic Stroke Patients (The Joint Commission): Recommended

**Description**: Proportion of ischemic stroke patients age 18 years or older for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., intra-venous (IV) thrombolytic (t-PA) therapy, or intra-arterial (IA) thrombolytic (t-PA) therapy, or mechanical endovascular reperfusion (MER)

therapy) in patients undergoing recanalization therapy and documented in the medical record, or documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This new facility-level process measure is based on evidence from the AHA/ASA guidelines supporting the use of a stroke rating—specifically the NIH Stroke Scale—for increased early detection and diagnosis in ischemic stroke patients. However, the Committee noted that the evidence did not support the 12-hour time frame for the NIH Score Scale performed on patients who did not undergo recanalization therapy. In discussing data on gaps in care, the Committee noted that current performance data show minimal improvement. Overall the Committee agreed the measure met the remaining NQF criteria and recommended it for endorsement.

### 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) (The Joint Commission): Recommended

**Description**: Proportion of SAH and ICH stroke patients age 18 years or older for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This new, facility-level process measure includes substantial evidence for severity assessment of SAH and ICH patients as part of an initial evaluation. The Committee agreed the evidence met the criteria and that there was a significant opportunity for improvement as performance rates were at approximately 80%. The Committee discussed concerns with the calculation of the intracerebral hemorrhage scores, which indicates a potential learning gap. The developer noted, before implementation, the measure would include the data element definition for guidance. Overall, the Committee agreed the measure met NQF criteria and recommended it for endorsement.

### 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity (Centers for Medicare & Medicaid Services): Recommended

**Description**: This hybrid stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients; **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Registry, Other

This risk-adjusted hybrid measure includes administrative claims and electronic health record data. Once implemented, this measure could replace the currently reported Hospital 30-Day Mortality following Acute Ischemic Stroke Hospitalization measure currently used in the CMS IQR program. The Committee found that the measure met the evidence and opportunity for improvement sub criterions. The Committee questioned the reliability of the measure with the intra-class correlation coefficient (ICC) value of 0.56, noting potentially significant variance in a hospital's score. The developer explained that the ICC value is impacted by the volume of cases within each hospital included in the data set. In discussing usability and use, the developer did not identify any unintended consequences but the Committee noted that there could be variation in the data collected across electronic health record systems. Ultimately, the Committee agreed the measure met NQF criteria and recommended this measure for endorsement.

### 0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports (American College of Radiology): Recommended

**Description**: Percentage of final reports for carotid imaging studies (neck magnetic resonance angiography (MRA), neck computerized tomographic angiography (CTA), neck duplex ultrasound, carotid angiogram) performed that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement; **Measure Type**: Process; **Level of Analysis**: Clinician: Individual; **Setting of Care**: Hospital/Acute Care Facility, Imaging Facility; **Data Source**: Administrative claims, Electronic Clinical Data: Registry

Receiving initial endorsement in 2008 and most recently in 2013, this process measure is currently in use in the CMS PQRS. The Committee agreed that there was strong evidence to support compliance with a standardized reporting criterion for carotid stenosis. Although the Committee noted concerns on the denominator which includes a vast target population thus challenging the lack of criteria for exclusions, the Committee felt the measure met reliability and validity criteria. Overall the Committee agreed the measure met NQF criteria and recommended this measure for endorsement.

### 1952 Time to Intravenous Thrombolytic Therapy (American Heart Association/American Stroke Association): Recommended

**Description**: Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less; **Measure Type**: Process; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data: Registry

This is facility-level measure was originally endorsed in 2012 and focuses on the rapid administration of intravenous tPA treatment to acute ischemic stroke patients within 60 minutes. This measure is included in various accountability programs including the Stroke Hospital Recognition Program through the Get with the Guidelines Stroke Registry. The Committee raised concerns about lack of exclusion criteria for hospitals with smaller case volumes and believed this could lead to measurement burden. The developer acknowledged the potential measurement burden and mentioned that coordinated care would essential specifically for smaller populations (i.e., pediatric). Ultimately, the Committee agreed the measure met the NQF criteria and recommended this measure for endorsement.

### 2111 Antipsychotic Use in Persons with Dementia (Pharmacy Quality Alliance): Recommended

**Description**: The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic medication without evidence of a psychotic disorder or related condition; **Measure Type**: Process; **Level of Analysis**: Health Plan, Population: National; **Setting of Care**: Other, Pharmacy; **Data Source**: Administrative claims

This process measure was originally endorsed in 2013 and addresses the overutilization of antipsychotics in older adults. The measure is planned for use in accountability programs including CMS Medicare Part D. The Committee agreed the evidence was strong, however, questioned why updated guidance from the American Geriatrics Society Beers criteria was not submitted. A Committee member was concerned that the denominator might not capture the appropriate clients, but the Committee ultimately passed the measure on validity. Additionally, the Committee cautioned against on-label use of antipsychotic medication. Overall, the Committee agreed that the measure met NQF criteria and recommended it for endorsement.

## *Approved for Trial Use*

### 2872 Dementia- Cognitive Assessment (Physician Consortium for Performance Improvement): Recommended for Approval for Trial Use

**Description**: Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period; **Measure Type**: Process; **Level of Analysis**: Clinician : Group/Practice, Clinician : Individual, Clinician : Team; **Setting of Care**: Ambulatory Care : Clinician Office/Clinic, Ambulatory Care : Urgent Care, Behavioral Health/Psychiatric : Inpatient, Other, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility, Occupational Therapy Services, 'Domiciliary', Rest Home or Custodial Care Services; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record

This new process eMeasure was reviewed for consideration in the NQF Approval for Trial Use Program. It is currently in use in the CMS PQRS and Meaningful Use Stage 2. The measure focuses on the annual assessment of cognition in patients with dementia. Overall, the Committee agreed the evidence supported the measure focus, however, noted the assessment of cognition could possibly compete with Medicare wellness assessments that also assess cognition. The Committee also noted that no disparities data had been presented but would be important to collect during trial use. Overall, the measure was recommended for approval for trial use.

## *Recommended for Inactive Endorsement with Reserve Status*

### 0435 STK-02: Discharged on Antithrombotic Therapy (The Joint Commission): Recommended for Reserve Status

**Description**: This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This facility-level measure was originally endorsed in 2008, and maintained endorsement in 2012; the measure is currently used in the CMS Hospital IQR program. The evidence provided—2010 AHA/ASA Guidelines for the Prevention of Stroke in Patients with Stroke or Transient Ischemic Attack—strongly supported that the prescription of antithrombotic therapy at discharge reduces stroke mortality and morbidity. The Committee expressed concern that disparities data were not presented. The Committee did not pass the measure on performance gap since the data displayed minimal opportunity for improvement, with mean hospital performance rates at approximately 97% since 2011. Reliability testing data were sufficient but noted that feedback from the measure users indicated that one data element may not capture the appropriate patients. The Committee agreed the measure met the remaining NQF criteria and recommended the measure for inactive endorsement with reserve status.

### 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter (The Joint Commission): Recommended for Reserve Status

**Description**: This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This facility-level measure was originally endorsed in 2008, and maintained endorsement in 2012; the measure is currently used in the CMS IQR program. The Committee agreed the underlying evidence for the measure had not changed since the last NQF endorsement review and accepted the previous evaluation. However, the Committee did not pass the measure on performance gap since the data displayed minimal opportunity for improvement, with mean hospital performance rates at approximately 97%. The Committee agreed the measure met the remaining NQF criteria and recommended the measure for inactive endorsement with reserve status.

### 0438 STK-05: Antithrombotic Therapy By End of Hospital Day Two (The Joint Commission): Recommended for Reserve Status

**Description**: This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1); **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This process measure, last endorsed in 2012, captures ischemic stroke patients who received antithrombotic therapy. The Committee agreed the underlying evidence for the measure had not changed since the last NQF endorsement review and accepted the previous evaluation. However, the Committee did not pass the measure on performance gap since the data showed minimal opportunity for improvement, with mean hospital performance at 98% since 2012. Additionally, the Committee noted disparities data were not presented. This measure has been in use in the IQR program but removed from the fiscal year 2017 measure set because CMS determined it is topped out. The Committee agreed the measure met the remaining NQF criteria and recommended the measure for inactive endorsement with reserve status.

### 0441 STK-10: Assessed for Rehabilitation (The Joint Commission): Recommended for Reserve Status

**Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This process measure, last endorsed in 2012, captures ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services. The Committee agreed the underlying evidence for the measure had not changed since the last NQF endorsement review and accepted the previous evaluation. However, the Committee did not pass the measure on performance gap since the data showed minimal opportunity for improvement, with mean hospital performance at 97%. This measure was been in use in the IQR program but finalized for removal from the fiscal year 2017 measure set because CMS determined it is topped out. The Committee agreed the measure met the remaining NQF criteria and recommended the measure for inactive endorsement with reserve status.

## *Not Recommended*

### 2832 STK-02: Discharged on Antithrombotic Therapy (The Joint Commission): Not Recommended

**Description**: This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Imaging/Diagnostic Study, Electronic Clinical Data: Laboratory, Electronic Clinical Data: Pharmacy

This measure has been re-specified into an electronic format from a previously-endorsed legacy, paper-based measure (#0435). Similar to Measure #0435, the Committee accepted the previous evaluation of the evidence submitted and agreed that it was adequate to support the measure. However, using the performance data from the legacy measure, the Committee did not agree there was an opportunity for improvement with a mean hospital performance rate at 98% since 2012. Therefore, this measure was not recommended for endorsement.

### 2833 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter (The Joint Commission): Not Recommended

**Description**: This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

This measure has been re-specified into an electronic format from a previously endorsed legacy, paper-based measure (#0436). Similar to Measure #0436, the Committee accepted the previous evaluation of the evidence submitted and agreed that it was adequate to support the measure. However, using the performance data from the legacy measure, the Committee felt there was no opportunity for

improvement with a mean hospital performance rate at 96% since 2014. Therefore, this measure was not recommended for endorsement.

### 2835 STK-05: Antithrombotic Therapy By End of Hospital Day Two (The Joint Commission): Not Recommended

**Description** This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1); **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

This measure has been re-specified into an electronic format from a previously endorsed legacy, paper-based measure (#0438). Similar to Measure #0438, the Committee accepted the previous evaluation of the evidence submitted and agreed that it was adequate to support the measure. However, using the performance data from the legacy measure, the Committee felt there was no opportunity for improvement with a mean hospital performance rate at 98% since 2012. Therefore, this measure was not recommended for endorsement.

### 2837 STK-10: Assessed for Rehabilitation (The Joint Commission): Not Recommended

**Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

This measure has been re-specified into an electronic format from a previously endorsed legacy, paper-based measure (#0441). Similar to Measure #0441, the Committee accepted the previous evaluation of the evidence submitted and agreed that it was adequate to support the measure. However, using the performance data from the legacy measure, the Committee believed the data failed to reflect an opportunity for improvement, with a mean hospital performance rate at approximately 97% since 2012. Therefore, this measure was not recommended for endorsement.

### 2865 CSTK-01: Modified Rankin Score (mRS) at 90 Days (The Joint Commission): Not Recommended

**Description**: Proportion of ischemic stroke patients age 18 years and older treated with intra-venous (IV) or intra-arterial (IA) thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) mRS is obtained via telephone or in-person; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This is a new, facility level process measure that aims to obtain Modified Rankin Score (mRs) for ischemic stroke patients within 90 days. Some Committee members questioned the evidence since it did not demonstrate how conducting an mRS within 90 days after acute stroke treatment improves health

outcomes. Consequently, the measure failed on evidence and the Committee could not reach consensus on the exception to empirical evidence criterion. Therefore, this measure was not recommended for endorsement.

### 2870 Overuse of Opioid Containing Medications for Primary Headache Disorders (American Academy of Neurology): Not Recommended

**Description**: Percentage of patients aged 12 years and older diagnosed with primary headache disorder, and taking an opioid containing medication who were assessed for opioid containing medication overuse within the 12-month measurement period, and treated or referred for treatment if identified as overusing opioid containing medication; **Measure Type**: Process; **Level of Analysis**: Clinician: Individual; **Setting of Care**: Ambulatory Care : Clinician Office/Clinic, Ambulatory Care : Urgent Care, Emergency Medical Services/Ambulance, Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

This new process measure was submitted for consideration in the NQF Approval for Trial Use Program. The developer submitted a study of nearly 6,000 patients of which 15.9% were current users of opioids. The study found that rates of rebound headache and healthcare resource utilization were greater for opioid users than non-users. While the Committee agreed that opioid use is not the standard route of treatment for headache, there was not sufficient evidence that this measure would lead to improved headache control. The Committee suggested that the developer consider a measure that focuses on the appropriate headache treatment rather than identifying inappropriate treatments. The Committee did not recommend this measure for approval for trial use.

## *Consensus Not Reached*

### 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis (The Joint Commission): Consensus Not Reached

**Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission. **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

Receiving initial endorsement in 2008 and maintenance review in 2012, this process measure is currently used in The Joint Commission's Hospital Accreditation Program and in its Stroke Certification programs for primary and comprehensive stroke centers. The Committee noted that immobilized patients are not listed in the exclusions although the measure controls for mobility. In addition, the Committee noted minimal opportunity for improvement, with 23% of hospitals conforming to the measure specification at a mean performance of 96%. A Committee member questioned the lack of disparities data presented in the measure. The Committee did not reach consensus on whether a sufficient performance gap exists but agreed the measure met all of the remaining NQF criteria. Overall, the Committee did not reach consensus on the suitability for endorsement of this measure. The Committee will re-evaluate this measure during its Post-Comment call on June 23, 2016.

### 2834 STK-04: Thrombolytic Therapy (The Joint Commission): Consensus Not Reached

**Description**: This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

This measure has been re-specified into an electronic format from a previously-endorsed legacy, paper-based measure (#0437). Similar to Measure #0437, the Committee accepted the previous evaluation of the evidence submitted and agreed that it was adequate to support the measure. However, some Committee members expressed concerns that BONNIE testing was used to validate the reliability of the measure, and therefore did not reach consensus on the reliability criteria. The measure failed on the feasibility criterion due to lack of data. Lastly, after discussion on the unintended consequences of improving stroke treatment and the impact it could have on stroke mimics, the Committee could not reach consensus on usability and use. Overall, the Committee did not reach consensus on the suitability for endorsement of this measure. The Committee will re-evaluate this measure during its Post-Comment call on June 23, 2016.

### 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity (Centers for Medicare & Medicaid Services): Consensus Not Reached

**Description**: This stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients; **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility: Normal by default; **Data Source**: Administrative claims, Electronic Clinical Data : Registry, Other

This new risk-adjusted outcome measure, planned for use in the CMS IQR, could replace the currently reported Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization measure. The measure calculates hospitals' 30-day risk-standardized mortality rates for patients who have been hospitalized with an ischemic stroke. The Committee agreed the evidence provided adequately supported the measure focus, however, the Committee questioned whether mortality is a valid quality indicator for stroke. The Committee could not reach consensus on the validity criterion and were concerned the measure may not be assessing quality of care. Other validity issues included the amount of missing data and exclusion of race in the final risk adjustment model. The Committee will re-evaluate this measure during the Post-Comment call on June 23, 2016,

### 1814 Counseling for Women of Childbearing Potential with Epilepsy (American Academy of Neurology): Consensus Not Reached

**Description**: All female patients of childbearing potential (12–44 years old) diagnosed with epilepsy who were counseled or referred for counseling for how epilepsy and its treatment may affect contraception OR pregnancy at least once a year; **Measure Type**: Process; **Level of Analysis**: Clinician: Group/Practice;

**Setting of Care**: Ambulatory Care: Clinician Office/Clinic; **Data Source**: Electronic Clinical Data: Electronic Health Record, Paper Medical Records

This process measure was originally endorsed in 2013 and is in current use within the CMS PQRS program. The Committee emphasized that, although clinical guidelines were provided to support the importance of counseling women on contraception, the evidence does not show a direct link to improved outcomes in women with epilepsy. Therefore, the Committee decided to exercise NQF's exception to the evidence. While the measure met the validity criterion, Committee members could not reach consensus on reliability, with testing performed at three practices. In addition, there were concerns about the feasibility of extracting the data elements based on the exclusions, which may all be documented differently. Overall, the Committee did not reach consensus on this measure. The Committee will re-evaluate this measure during its Post-Comment call on June 23, 2016.

### *Vote Deferred*

#### 0439 STK-06: Discharged on Statin Medication (The Joint Commission): Vote Deferred

**Description**: This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

When reviewing the evidence to support this measure, the Committee noted that the denominator had changed since the last endorsement. The developer stated that the performance gap data presented were based on the previous denominator and that they did not have updated information for the Committee's consideration. The developer noted that this was due to the timing of when the guidelines were updated. The developer stated they may have one quarter's worth of data to submit to the Committee in May of 2016. Therefore, the Committee agreed to defer voting on this measure until the post-comment call on June 23, 2016.

#### 2836 STK-06: Discharged on Statin Medication (The Joint Commission): Vote Deferred

**Description**: This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge; **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Imaging/Diagnostic Study, Electronic Clinical Data: Laboratory, Electronic Clinical Data: Pharmacy

This measure, #2836, has been re-specified into an electronic format from a previously-endorsed legacy, paper-based measure (#0439). When reviewing evidence for measure #0439, the Committee noted that the denominator had changed since the last endorsement. The developer stated that the performance gap data presented were based on the previous denominator and that they did not have updated information for the Committee's consideration. The developer noted that this was due to the timing of when the guidelines were updated. The developer stated they may have one quarter's worth of data to

submit to the Committee in May of 2016. Therefore, the Committee agreed to defer voting on measure #0439, and this eMeasure, until the post-comment call on June 23, 2016.

## References

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## Appendix A: Details of Measure Evaluation

**Rating Scale: H**=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable; **Y**=Yes; **N**=No

## Measures Recommended

### 0437 STK04 Thrombolytic Therapy

Submission | Specifications

**Description**: This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.

**Numerator Statement**: Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well.

**Denominator Statement**: Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well.

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation**; 1b. Performance Gap: **H-6**; **M-16**; **L-1**; **I-0**

Rationale:

- The Committee summarized the evidence presented by the developer during the previous endorsement, citing a study that early administration of thrombolytic therapy to eligible ischemic stroke patients within the three hour time frame improves patient outcomes. The developer presented recent guidelines from the European Cooperative Acute Stroke Study III showing that thrombolytic therapy can be administrated effectively up to 4.5 hours after time last known well. The Committee did not consider the European Cooperative Acute Stroke Study a fundamental change to the evidence and accepted the prior evaluation of this measure without further discussion.
- The Committee reviewed data on the opportunity for improvement and determined that although median hospital performance had improved overtime, from 57% to 75%, there was still room for improvement.
- Disparities data were not provided for this measure. The Committee mentioned that disparities data would be important to assess whether there are gaps among subpopulations.

**2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria**

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

2a. Reliability: **Accepted Prior Evaluation** 2b. Validity: **H-1**; **M-15**; **L-4**; **I-3**

Rationale:

- Several of the tested data elements showed strong inter-rater reliability, ranging from 80% to greater

than 90%; inter-rater reliability for the element 'reason for not initiating IV thrombolytic therapy' was lowest at 77%. These data were presented during the last review; therefore the Committee agreed to accept the prior evaluation on reliability.

- A Committee member questioned the exclusion 'reason for extending the initiation of IV thrombolytic therapy' and its relationship to the European Cooperative Acute Stroke Study III. The Committee accepted the developer's response that the exclusion had been included in the previous submission as an open text field in the abstraction guidelines. The developer further clarified that the computer based measure logic algorithm had been updated with a data element to capture extended IV thrombolytic therapy.
- The developer clarified that patients could also be excluded for other medical reasons through the 'extended IV thrombolytic therapy' data element.
- The developer also acknowledged that exclusions may be applied differently across hospitals.

**3. Feasibility: H-10; 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:

- Some of the data elements are captured in an electronic health record and can be collected via chart abstraction at facilities without an electronic health records.
- The Committee reviewed the feasibility of capturing data without undue burden and whether the measure could be implemented for performance measurement.

**4. Usability and Use: H-7; M-15; L-0; I-1**

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

Rationale:

- The Committee discussed the unintended consequences of hospitals working to improve stroke treatment and the impact this could have on stroke mimics, particularly in pediatric patients.
- A Committee member questioned whether the denominator includes patients aged 18 and older; the American Academy of Pediatrics defines pediatric up to age 21.
- The developer noted that all of their in-patient hospital measures are specified for adults and that the measure is not intended to address the pediatric population.

**5. Related and Competing Measures**

- Measure # 0437 competes with #1952 Time to Intravenous Thrombolytic Therapy. Measure #0437 and #1952 focus on acute ischemic stroke patients for whom IV tPA was initiated at the hospital. They also share the same patient population, ischemic stroke patients.
- Measure #0437 is related to Measure #0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival. These measures share some key data elements (i.e., Last Known Well, Date Last Known Well, Time Last Known Well, and Arrival Time) but focus on different target populations and purposes: #0661 focuses on imaging in the ED setting, while #0437 focuses on administration of thrombolytic therapy in an inpatient setting.
- To address harmonization concerns, the developer stated that the measure maintenance teams for #0661 and #0437 work closely together and coordinate updates to the measures' specifications (e.g., updates to the appropriate ICD-10 codes to determine measure inclusion).
- Measure #0437 is related to measure #0288 Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival, however, #0288 focuses on patients with acute myocardial infarction receiving fibrinolytic therapy.

**Standing Committee Recommendation for Endorsement: Y-23; N-0**

**6. Public and Member Comment**

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

| 0437 STK04 Thrombolytic Therapy |
|---|
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports |
|---|
| Submission \| Specifications |
| **Description**: Percentage of final reports for carotid imaging studies (neck magnetic resonance angiography (MRA), neck computerized tomographic angiography (CTA), neck duplex ultrasound, carotid angiogram) performed that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement.<br>**Numerator Statement**: Final reports for carotid imaging studies that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement<br>**Denominator Statement**: All final reports for carotid imaging studies (neck MRA, neck CTA, neck duplex ultrasound, carotid angiogram) performed.<br>**Exclusions**: No Denominator Exclusions or Denominator Exceptions<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Clinician : Individual<br>**Setting of Care:** Hospital/Acute Care Facility, Imaging Facility<br>**Type of Measure**: Process<br>**Data Source**: Administrative claims, Electronic Clinical Data : Registry<br>**Measure Steward**: American College of Radiology (ACR) |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure meets the Importance criteria.</u>**<br>(1a. Evidence, 1b. Performance Gap)<br>1a. Evidence: **H-1; M-16; L-1; I-1**; 1b. Performance Gap: **H-9; M-10; L-0; I-0**<br><u>Rationale</u>:<br>• The Committee agreed that there was strong evidence to support compliance with a standardized reporting criterion for carotid stenosis.<br>• The developer provided performance scores based on data from 2010 – 2013. While these rates do show a steady increase in performance, the Committee agreed there is still opportunity for improvement with average performance rates at 76% (in 2013). |
| **2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>**<br>(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)<br>2a. Reliability: **H-15; M-4; L-0; I-0;** 2b. Validity: **H-11; M-8; L-0; I-0**<br><u>Rationale</u>:<br>• The testing sample included 2012-2014 data from 133,717 physicians and 2,268,250 patients; data from both claims and registry were used. The Committee noted concerns with the denominator, which includes a vast target population and potential exclusions challenges.<br>• Developers conducted inter-rater reliability testing by comparing data gathered by two trained clinical abstractors and evaluating the rate of agreement among the abstractors. The developer assessed data from three radiology sites during calendar year 2010; 109 records were included in the testing sample. Despite the updated testing, the Committee agreed there were no major changes to reliability since the last submission and that the new testing data continued to support reliability of the measure.<br>• New face validity was assessed by an expert panel of 14 members. The result of the expert panel rating was that 85.71% of respondents either agreed or strongly agreed that this measure could accurately |

| 0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports |
|---|
| distinguish good and poor quality. |
| **3. Feasibility: H-18; M-1; L-0; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• The Committee agreed the measure is feasible. All data elements are in defined fields in electronic claims and are generated by or collected by healthcare personnel during the provision of care. |
| **4. Usability and Use: H-15; M-4; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The measure met the usability and use criterion and is currently included in the CMS Physician Quality Reporting System. |
| **5. Related and Competing Measures**<br>• No related or competing measures noted. |
| **Standing Committee Recommendation for Endorsement**: **Y-19; N-0** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival |
|---|
| Submission \| Specifications |
| **Description**: This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the emergency department (ED) within two hours of the onset of symptoms and have a head computed tomography (CT) or magnetic resonance imaging (MRI) scan interpreted within 45 minutes of ED arrival. The measure is calculated using chart-abstracted data, on a rolling, quarterly basis and is publicly reported, in aggregate, for one calendar year. The measure has been publicly reported, annually, by CMS as a component of its Hospital Outpatient Quality Reporting (HOQR) Program since 2012.<br>**Numerator Statement**: The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan interpreted within 45 minutes of ED arrival.<br>**Denominator Statement**: The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan ordered.<br>**Exclusions**: Studies are excluded for any patients under 18 years of age, patients who expired in the ED, or patients who left the ED against medical advice or discontinued care. Additionally, patients who do not arrive to the ED within two hours of symptom onset or who do not have a head CT or MRI scan ordered are excluded from the target population.<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population: National<br>**Setting of Care:** Emergency Medical Services/Ambulance, Hospital/Acute Care Facility |

## 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival

**Type of Measure**: Process

**Data Source**: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records An electronic data collection tool is made available from vendors or facilities can download the free CMS Abstraction & Reporting Tool (CART). Paper tools for manual abstraction, which are posted on www.QualityNet.org, are also available for the CART tool. These tools are posted on www.QualityNet.org.

**Measure Steward**: Centers for Medicare & Medicaid Services

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-1**; **M-14**; **L-5**; **I-2**; 1b. Performance Gap: **H-21**; **M-2**; **L-0**; **I-0**

<u>Rationale</u>:

- The Committee agreed that new evidence submitted by the developer supported the need for urgent imaging to treat acute ischemic stroke. However, the Committee noted that there was no empirical evidence to support the 45 minute time interval defined in the measure.
- Additional Committee discussion centered on the difficulty of properly tracking time of patient arrival in an electronic health record and whether the 45 minute timeframe was realistic in clinical practice.
- One Committee member noted that other factors could lead to potential delays in interpreting CT or MRI scans. Another Committee raised an unintended consequence where the time interval may result in a 45 minute delay in interpreting the scan.
- A Committee member suggested that the developer capture both the time that the scan is completed and the time the scan is interpreted.
- The Committee acknowledged there is an opportunity for improvement in treating ischemic stroke, with disparities existing for certain subpopulations including African Americans, Hispanics, and women.

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

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

2a. Reliability: **H-5**; **M-15**; **L-3**; **I-0** 2b. Validity: **H-0**; **M-17**; **L-3**; **I-3**

<u>Rationale</u>:

- Reliability testing was conducted at the measure score level. The data used for testing included 92,633 cases from 2,985 hospital associated outpatient services nationwide. Results of reliability testing ranged from .62 to 1.0 with a median of .77.
- The Committee accepted the empirical validity testing that assessed the agreement between facility abstraction and auditor abstraction of eight data elements from 774 cases. The Kappa statistic was .52 and 1.00 for numerator and denominator cases, respectively.

**3. Feasibility: H-2; M-16; L-5; I-0**

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

<u>Rationale</u>:

- Data are available through administrative claims, electronic clinical data, and electronic health records, paper records and the Centers for Medicare & Medicaid Services abstraction and reporting tool.
- A Committee member raised concern about the capability of data collection systems at smaller hospitals. The developer responded that manual chart abstraction is required for this measure regardless of where the data are stored.

**4. Usability and Use: H-15; M-7; L-1; I-0**

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

| 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival |
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| Rationale:<br>• The Committee acknowledged that the measure is publicly reported through the CMS HOQR program and that performance has increased from 14.5% in 2012 to 71% in 2014.<br>• Unexpected findings showed wide variation in facility performance, suggesting that clearer abstraction guidance could improve measure validity. Additionally, many facilities had not met the minimum case count due to the small sampling requirement and variability in application of exclusion criteria. Ultimately, the Committee agreed the measure met the usability and use criterion. |
| **5. Related and Competing Measures**<br>• Measure #0661 and #0437 STK 04 Thrombolytic Therapy share some key data elements (i.e., Last Known Well, Date Last Known Well, Time Last Known Well, and Arrival Time). The two measures focus on different target populations and purposes: #0661 focuses on imaging in the ED setting, while #0437 focuses on administration of thrombolytic therapy in an inpatient setting.<br>• To address harmonization concerns, the developer stated that the measure maintenance teams for #0661 and #0437 work closely and coordinate updates to the measures' specifications (e.g., updates to the appropriate ICD-10 codes to determine measure inclusion). |
| **Standing Committee Recommendation for Endorsement: Y-19; N-4** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 1952 Time to Intravenous Thrombolytic Therapy |
|---|
| Submission \| Specifications |
| **Description**: Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less.<br>**Numerator Statement**: Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic administration (door-to-needle time) of 60 minutes or less.<br>**Denominator Statement**: All acute ischemic stroke patients who received intravenous thrombolytic therapy during the hospital stay.<br>**Exclusions**: Denominator Exclusions:<br>•Patients less than 18 years of age<br>•Patient stroke occurred while in hospital<br>•Patients received in transfer from the inpatient, or outpatient of another facility<br>•Patients that receive tPA greater than 4.5 hours after Last Known Well<br>•Clinical trial<br>Denominator Exceptions:<br>Patients with documented Eligibility or Medical reason for delay in treatment [eg, social, religious, initial refusal, hypertension requiring aggressive control with intravenous medications, inability to confirm patients eligibility, or further diagnostic evaluation to confirm stroke for patients with hypoglycemia (blood glucose < 50); seizures, or major metabolic disorders, or management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure requiring intubation), or investigational or experimental protocol for thrombolysis.] |

| 1952 Time to Intravenous Thrombolytic Therapy |
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| **Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data : Registry<br>**Measure Steward**: American Heart Association/American Stroke Association |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure meets the Importance criteria.</u>**<br>(1a. Evidence, 1b. Performance Gap)<br>1a. Evidence: **H-18; M-3; L-0; I-0**; 1b. Performance Gap: **H-15; M-6; L-0; I-0**<br><u>Rationale</u>:<br>• The Committee agreed the developer provided sufficient data to support the evidence criterion. Data for this process measure included the AHA/ASA Guidelines from 2007, which demonstrate that when acute ischemic stroke patients receive intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less, will have lower in-hospital mortality and intracranial hemorrhage, better clinical and functional outcomes. Guidelines were based on 16 randomized control trials, 1 open trial, 32 observational studies, and 4 meta-analyses.<br>• Submitted Get with the Guidelines Registry data demonstrated the average performance increased from 53% to 70% (2012 to 2015). The Committee agreed there is still an opportunity for improvement. |
| **2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>**<br>(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)<br>2a. Reliability: **H-1; M-20; L-0; I-0;** 2b. Validity: **H-1; M-19; L-1; I-0**<br><u>Rationale</u>:<br>• For measure score reliability, the developer conducted beta-binomial analysis at the measure score level. This measure had a score of 0.63 for reliability when evaluated at the minimum level of quality reporting events, and 0.81 for reliability at the average number of quality events.<br>• Face validity was assessed by an expert panel of 20 members. The mean rating was 4.2 out of 5.<br>• The Committee noted the lack of exclusion criteria for hospitals with smaller case volumes and believed this could lead to measurement burden. The developer acknowledged the Committee's concern and noted the importance of appropriate care coordination especially for hospitals with smaller case volumes. |
| **3. Feasibility: H-2; M-19; L-0; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br><u>Rationale</u>:<br>• The Committee agreed the measure is feasible. All data elements are in defined fields in electronic claims and are generated by or collected by healthcare personnel during the provision of care. |
| **4. Usability and Use: H-4; M-15; L-2; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br><u>Rationale</u>:<br>• This measure is included in various accountability programs including Get with the Guidelines – Stroke Hospital Recognition Program. |
| **5. Related and Competing Measures**<br>• Measure #1952 competes with #0437 STK04 Thrombolytic Therapy. These measures have similar measure foci and populations, but #1952 focuses on the timely administration of tPA rather than |

| 1952 Time to Intravenous Thrombolytic Therapy |
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| whether tPA should be administered for eligible patients (i.e., there could be varying reasons that a client is not treated within 60 minutes). During the Post-meeting Call, the developer stated that measure #0437 and #1952 have been harmonized to the extent possible. |
| **Standing Committee Recommendation for Endorsement**: **Y-21; N-0** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2111 Antipsychotic Use in Persons with Dementia |
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| Submission \| Specifications |
| **Description**: The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic medication without evidence of a psychotic disorder or related condition.<br>**Numerator Statement**: The number of patients in the denominator who had at least one prescription and > 30 days supply for any antipsychotic medication during the measurement period and do not have a diagnosis of schizophrenia, bipolar disorder, Huntington's disease or Tourette's.<br>**Denominator Statement**: All patients 65 years of age and older continuously enrolled during the measurement period with a diagnosis of dementia and/or two or more prescription claims within the measurement year for a cholinesterase inhibitor or an NMDA receptor antagonist within the measurement year where the sum of days supply is >60.<br>**Exclusions**: N/A<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Health Plan, Population : National<br>**Setting of Care:** Other, Pharmacy<br>**Type of Measure**: Process<br>**Data Source**: Administrative claims<br>**Measure Steward**: Pharmacy Quality Alliance |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>**<br>(1a. Evidence, 1b. Performance Gap)<br>1a. Evidence: **H-5; M-10; L-1; I-0**; 1b. Performance Gap: **H-2; M-14; L-0; I-0**<br><u>Rationale</u>:<br>• No new evidence was submitted by the developer, however the Committee pointed out that the American Geriatric Society updated the Beers criteria for potentially inappropriate medication use in older adults to include antipsychotics.<br>• The Committee agreed that the gap in performance (7.7% to 19.4%) across 731 Medicare contracts and the disparity of antipsychotic prescription among those patients living in nursing homes (23.9%) compared to those living in the community (10.8%), highlighted an opportunity for improvement. |
| **2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>**<br>(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)<br>2a. Reliability: **H-0; M-16; L-0; I-0;** 2b. Validity: **H-0; M-13; L-3; I-0**<br><u>Rationale</u>:<br>• The Committee discussed the breadth of the denominator which would capture patients without dementia (e.g., mild cognitive impairment, Parkinson's disease), who are prescribed cholinesterase |

| 2111 Antipsychotic Use in Persons with Dementia |
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| inhibitors and N-Methyl-D-aspartate antagonists (NMDA). A Committee member mentioned the Food and Drug Administration's (FDA) 2005 advisory requiring that manufacturers of atypical psychotics to include a black box warning to indicate that use increases risk of mortality in patients with dementia.<br>• Committee members highlighted the importance of this measure, but also acknowledged the challenge in specifying the denominator. The Committee also discussed whether a diagnosis of Parkinson's disease should be an inclusion or exclusion for this measure.<br>• The developer noted that the medications included in the measure are FDA approved for dementia related to Alzheimer's. The developer noted that by including cholinesterase inhibitors and NDMA antagonist, they may be able to detect more clients with dementia who were prescribed antipsychotics.<br>• The developer submitted updated reliability testing. Testing was conducted using 720 Medicare Part D contracts, including 35 million beneficiaries. With measurement at the health plan level, testing results showed the contract reliability mean score of 0.76 and the median score of 0.87.<br>• An expert panel was convened to assess face validity with 67% of the panel in favor of endorsement. The Committee accepted the expert panel's results. |
| **3. Feasibility: H-11; M-5; L-0; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• The Committee agreed that the measure is feasible and that the data are easily collected through electronic claims. |
| **4. Usability and Use: H-3; M-12; L-1; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• A Committee member questioned why the measure has not been publicly reported or used in accountability programs. The developer clarified that the measure was designed for Medicare Part D patient safety reports.<br>• The Committee discussed the unintended consequence of approving a measure that would recommend against on-label use when some antipsychotics are indicated for particular conditions. The Committee was concerned that the measure only excluded four conditions (i.e., schizophrenia, Tourette's Huntington's and bipolar disorder) when other conditions (i.e., Parkinson's) are also indicated for antipsychotic treatment.<br>• The developer noted that the measure is used for quality improvement purposes only. The measure is reported by providers, but is no longer considered a star rating performance measure and would not be used as a performance-based measure for payment. |
| **5. Related and Competing Measures**<br>There were no related measures. |
| **Standing Committee Recommendation for Endorsement**: **Y-16; N-0** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2863 CSTK-06: Nimodipine Treatment Administered |
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| Submission \| Specifications |

## 2863 CSTK-06: Nimodipine Treatment Administered

**Description**: Proportion of subarachnoid hemorrhage (SAH) patients age 18 years and older for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.

This is the sixth measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate). Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible.

**Numerator Statement**: SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.

**Denominator Statement**: SAH patients

**Exclusions**: • Patients less than 18 years of age

• Patients who have a Length of Stay greater than 120 days

• Patients with Comfort Measures Only documented on the day of or day after hospital arrival

• Patients enrolled in Clinical Trials

• Patients discharged within 24 hours of arrival at this hospital

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-14; M-9; L-0; I-0**; 1b. Performance Gap: **H-3; M-20; L-0; I-0**

<u>Rationale</u>:

- The Committee acknowledged the importance of administering nimodipine to patients with aneurysmal subarachnoid hemorrhage and its correlation to increased independence and decreased mortality.
- The developer presented data that show variability across hospitals, with the top hospitals performing at the 10th percentile (0.75) and the low performing hospitals at the 90th percentile (0.92). Committee members concluded there is a performance gap and opportunity for improvement.

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

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

2a. Reliability: **H-2; M-21; L-0; I-0;** 2b. Validity: **H-1; M-21; L-1; I-0**

<u>Rationale</u>:

- The Committee agreed that the reliability and validity testing met the evaluation criterion.
- Inter-rater reliability testing was conducted at 12 sites with 281 records showing a percent agreement greater than 95% and a Kappa score of 0.93.
- Empirical validity testing was conducted at the measure score level with two hypotheses: 1- Hospital results for two process measures for hemorrhagic stroke CSTK 03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) and CSTK 06: Nimodipine Treatment Administered. A Pearson Correlation Coefficient was calculated to compare the results of the two measures and hypotheses 2- Hospitals that do well on one stroke measure are likely to do well on other stroke measures. Pearson Correlation coefficients were calculated to compare results of several stroke measures (p-value = 0.85).

## 2863 CSTK-06: Nimodipine Treatment Administered

**3. Feasibility: H-3; M-19; L-1; I-0**

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

Rationale:

- The Committee acknowledged that the measure is currently in use and the data are routinely generated through clinical care delivery.
- Although data can be abstracted, the Committee expressed concern that not all hospitals are able to generate the data electronically; manual paper abstraction may add to data collection burden (averaging $3.50 per abstraction and 45 minutes per record).

**4. Usability and Use: H-3; M-19; L-1; I-0**

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

Rationale:

- This measure is currently being used for The Joint Commission Care Certification for Comprehensive Stroke Centers.
- The developer plans to include this measure in public reporting and external benchmarking programs.

**5. Related and Competing Measures**

- Measure #2863 is related to #2866 CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate). These measures assess similar populations, however, #2863 focuses on SAH clients that received treatment whereas #2866 focuses on whether an assessment was done prior to medical intervention.

**Standing Committee Recommendation for Endorsement**: **Y-22; N-1**

**6. Public and Member Comment**

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients

Submission | Specifications

**Description**: Proportion of ischemic stroke patients age 18 years or older for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., intra-venous (IV) thrombolytic (t-PA) therapy, or intra-arterial (IA) thrombolytic (t-PA) therapy, or mechanical endovascular reperfusion (MER) therapy) in patients undergoing recanalization therapy and documented in the medical record, or documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy.

This is the first in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate); CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible.

**Numerator Statement**: Ischemic stroke patients for whom an initial NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, OR

| 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy.<br>**Denominator Statement**: Ischemic stroke patients who arrive at this hospital emergency department (ED).<br>**Exclusions**: • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Patients admitted for Elective Carotid Intervention<br>• Patients who do not undergo recanalization therapy and are discharged within 12 hours of arrival at this hospital<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population : National<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data, Paper Medical Records<br>**Measure Steward**: The Joint Commission |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>**<br>(1a. Evidence, 1b. Performance Gap)<br>1a. Evidence: **H-0; M-16; L-5; I-0**; 1b. Performance Gap: **H-6; M-16; L-0; I-0**<br><u>Rationale</u>:<br>• The Committee agreed the developer provided sufficient data to support the evidence criterion. The developer provided evidence from the American Heart Association/American Stroke Association with two guideline statements for the emergency evaluation and diagnosis of acute ischemic stroke. However, the Committee believed the evidence did not support the 12-hour time frame for documenting that the NIH Score Scale was performed on patients who did not undergo recanalization.<br>• Additionally, the Committee noted minimal performance improvement but agreed there was an opportunity for improvement, with a mean hospital rate of 85% in Q2 in 2015. |
| **2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>**<br>(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)<br>2a. Reliability: **H-2; M-20; L-0; I-0;** 2b. Validity: **H-1; M-15; L-6; I-0**<br><u>Rationale</u>:<br>• Inter-rater reliability testing of 14 data elements was conducted at 12 sites with 281 total records (from 2013). Percent agreement for the 14 data elements ranged from 71.5% (Discharge Time) to 99.3% (ED Patient).<br>• Empirical validity testing was conducted at the measure score level. The developer conducted several construct validation analyses, first hypothesizing a relationship between this measure and three other TJC stroke measures (specifically testing the hypothesis that hospitals that perform well on this measure will likely perform well on the other measures). The developer examined the degree of association between the measure results using the Pearson Correlation Coefficient, with a p- value of 0.038. The Committee deemed this to be a statistically significant positive correlation between the two measures. |
| **3. Feasibility: H-9; M-11; L-2; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br><u>Rationale</u>:<br>• The Committee agreed the measure is feasible. All data elements are in defined fields in electronic claims and generated or collected by and used by healthcare personnel during the provision of care |

## 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients

**4. Usability and Use: H-15; M-7; L-0; I-0**

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

Rationale:

- This measure is included in the Joint Commission Disease-Specific Care Certification for Comprehensive Stroke Centers. The developer plans to include the measure in public reporting programs and for external benchmarking; a timeframe was provided.
- There were no unintended negative consequences reported or detected during testing or since implementation of the measure specifications.

**5. Related and Competing Measures**

- Measure #2864 and Measure #2866 CSTK 03 Severity Measurement Performed for Subarachnoid Hemorrhage and Intracerebral Hemorrhage Patients (Overall Rate) are related. The measure focus is the same as both assess (through a score or measurement) the patient prior to a medical intervention. However, the patient populations are different as measure #2864 focuses on ischemic patients and #2866 on hemorrhagic stroke patients.

**Standing Committee Recommendation for Endorsement**: **Y-19; N-3**

**6. Public and Member Comment**

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate)

Submission | Specifications

**Description**: Proportion of SAH and ICH stroke patients age 18 years or older for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.

This is the third measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible.

**Numerator Statement**: CSTK-03 The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; OR documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.

CSTK-03a The number of SAH stroke patients for whom a Hunt and Hess Scale is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; OR documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.

## 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate)

CSTK-03b The number of ICH stroke patients for whom an ICH Score is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; OR documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.

**Denominator Statement**: SAH and ICH stroke patients who arrive at this hospital emergency department (ED).

**Exclusions**: • Patients less than 18 years of age

• Patients who have a Length of Stay greater than 120 days

• Patients with Comfort Measures Only documented on the day of or day after hospital arrival

• Non-surgical patients discharged within 6 hours of arrival at this hospital

• Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma (ICD-9-CM Other Diagnosis Codes as defined in Appendix A, Table 8.2f)

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-0; M-17; L-4; I-1**; 1b. Performance Gap: **H-18; M-3; L-0; I-0; ;** Evidence Exception: **Y-X; N-X**

<u>Rationale</u>:

- Evidence provided by the developer included three clinical guidelines indicating severity measurement for all SAH and ICH patients, increases early detection and diagnosis of stroke and increases the identification of patients eligible for surgical intervention.
- Data on performance gap and opportunity for improvement were provided from both the pilot test (66 sites and 2471 cases) and data collected in early 2015. Assuming a target performance of 100%, the developer indicated there is a possible gap of 80%; the Committee concluded that an opportunity for improvement still remains.

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

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

2a. Reliability: **H-5; M-16; L-0; I-0;** 2b. Validity: **H-7; M-14; L-1; I-0**

<u>Rationale</u>:

- The developer conducted reliability testing at the data element level within 12 participating sites, using 281 medical records. Percent agreement of the data elements between the abstractors ranged from 71.5% for discharge time and 99.3% for confirmation of emergency department patient. Kappa scores were calculated on three data elements: Initial Hunt and Hess performed (K=0.91), Initial ICH Score performed (K=0.86) and Emergency Department patient (K=0.96).
- Empirical validity testing was conducted at the performance score level. The developer examined the Pearson Correlation Coefficient in comparison to three distinct subpopulations (ischemic stroke without procedure, ischemic stroke with IV t-PA, IA t-PA, or MER; and hemorrhagic stroke); these data show a p-value of 0.85.
- Face validity of data elements was assessed via hospital survey and focus groups but did not address validity of the measure score as a representation of quality.

**3. Feasibility: H-9; M-13; L-0; I-0**

*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/*

| 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
|---|
| *unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• While the Committee agreed that data collection for this measure should be simple and feasible, the value of the data relative to the cost of collection is unclear. |
| **4. Usability and Use: H-1; M-19; L-1; I-1**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The Committee discussed measure user feedback that indicated some users may have had difficulty calculating the ICH score. |
| **5. Related and Competing Measures**<br>• Measure #2866 and Measure #2864 CSTK01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients are related. The measure foci are the same; both assess (through a score or measurement) the patient prior to a medical intervention. However, the patient populations are different as measure #2866 focuses on both hemorrhagic and intracerebral patients, and #2864 focuses on ischemic stroke patients. |
| **Standing Committee Recommendation for Endorsement**: **Y-21; N-1** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|
| Submission \| Specifications |
| **Description**: This hybrid stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This measure is a newly developed measure with a cohort and outcome that is harmonized with the CMS's current publicly reported claims-based stroke mortality measure, and includes the National Institutes of Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. The measure is referred to as a hybrid because it is CMS's intention to calculate the measure using two data sources: Medicare fee-for-service (FFS) administrative claims and clinical electronic health record (EHR) data.<br>**Numerator Statement**: The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke.<br>**Denominator Statement**: The cohort includes inpatient admissions for Medicare FFS patients, age 65 years and older, who were discharged from non-federal, short-term, acute care hospitals with a principal discharge diagnosis of acute ischemic stroke.<br>Additional details are provided in S.9 Denominator Details.<br>**Exclusions**: The measure excludes admissions for patients: |

2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity

1. With inconsistent or unknown vital status or other unreliable data;

2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and

3. Discharged against medical advice (AMA).

For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort.

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

**Level of Analysis:** Facility

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Outcome

**Data Source**: Administrative claims, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Laboratory, Other, Electronic Clinical Data : Registry

**Measure Steward**: Centers for Medicare & Medicaid Services (CMS)

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Y-20; N-1**; 1b. Performance Gap: **H-8; M-14; L-0; I-0**

<u>Rationale</u>:

- The developer cited studies demonstrating that appropriate guideline-recommended care and timely treatment for stroke patients can reduce the risk of mortality within 30 days of hospital admission.
- The developer provided risk-standardized mortality rates using two data sources: July 2011 – June 2014 Medicare Administrative claims and 2013 AHA/ASA GWTG-Stroke Registry. Both values for the NIHSS were obtained from the Registry as a surrogate for NIHSS scores that will be obtained from ICD-10 codes beginning in October 2016. With the mean risk-standardized mortality rate at 14.5%, the Committee agreed that the data reflect opportunity for improvement.
- The developer also presented disparities data using three subpopulations (Dual Eligibles, African Americans and AHRQ SES Index); these data show minimal differences in the mortality rates across hospitals.

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

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

2a. Reliability: **H-2; M-18; L-1; I-1;** 2b. Validity: **H-0; M-16; L-6; I-0**

<u>Rationale</u>:

- The measure is specified at the facility-level for the hospital/acute care setting. The denominator includes all Medicare FFS beneficiaries, age 65 and over, with a principal discharge diagnosis of acute ischemic stroke.
- The developer used a split-sample methodology to test the measure score reliability, assigning half of the patients in each hospital to two separate groups. Then the developer calculated the performance measure score for each hospital in each of the two groups, and compared the agreement between each hospital's paired scores using the intra-class-correlation coefficient (ICC). A correction factor to account for the overall sample size was also applied. The ICC values from the split-sample analysis was 0.56, indicating 56% of the variance in scores was due to differences between hospitals. According to the Landis and Koch classification, this is interpreted as moderate agreement.
- Data element validity of electronic clinical data elements: The developer validated all three electronically abstracted critical EHR data elements (heart rate, diastolic blood pressure, and glucose) against manual chart abstraction.

| 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|
| • Empirical validity testing was conducted at the measure score level by comparing this measure to two similar stroke mortality measures. All three models include a total of 188,975 hospital admissions derived from registry and claims data.<br>• The developer noted that each of the three cohorts for the three risk models used the same inclusion/exclusion criteria and a risk-adjustment (statistical modeling) strategy and only differed with respect to the risk variables used. |
| **3. Feasibility: H-3; M-16; L-2; I-1**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• All data elements are in defined fields in a combination of electronic sources. Data elements are also generated or collected and used by healthcare personnel during the provision of care.<br>• Data availability was tested in three separate health systems and three EHRs (Epic, Cerner, and GE Centricity). Data accuracy was tested in two hospitals and two EHRs (Cerner and GE Centricity).<br>• The data element feasibility assessment scorecard submitted by the developer demonstrated a feasibility score of "3" (highest rating) on all four components (i.e., data availability, data accuracy, data standards, and workflow) for the required clinical data elements (heart rate, diastolic blood pressure, and glucose). |
| **4. Usability and Use: H-2; M-16; L-3; I-1**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• This measure is not currently in use in any publicly reported or accountability programs. However, CMS intends to implement this measure in the Hospital IQR program once the new NIH Stroke Scale ICD-10 codes and the core clinical data elements (CCDE) have been in use for three years. Once implemented, this measure could replace the currently reported Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure.<br>• The developer did not identify any unintended consequences related to this measure; however the Committee did raise concerns with variations in electronic health record systems. |
| **5. Related and Competing Measures**<br>• Measure #2877 and #2876 Hospital 30-day, all-cause, risk standardized mortality rate following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity are competing measures as they have the same patient populations and the same focus (ischemic stroke patients and 30-day mortality).<br>• Measure #2876 uses administrative claims data for risk adjustment. The developer noted that #2876 is otherwise harmonized with measure #2877.<br>• Measure #2877 is related to #0467 Acute Stroke Mortality rate because the focus is on mortality in acute stroke patients. However, measure #0467 captures in hospital deaths per 1,000 discharges with acute stroke as the principal diagnosis for individuals aged 18 and older. Measure #2877 is a 30-day, all cause RSMR including Medicare patients aged 65 and older in the denominator |
| **Standing Committee Recommendation for Endorsement**: **Y-19; N-2** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

## Measures Recommended for Inactive Endorsement with Reserve Status

### 0435 STK 02: Discharged on Antithrombotic Therapy

Submission | Specifications

**Description**: This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy,STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.

**Numerator Statement**: Ischemic stroke patients prescribed antithrombotic therapy at hospital Discharge.

**Denominator Statement**: Ischemic stroke patients

**Exclusions**: • Less than 18 years of age

• Length of Stay > 120 days

• Comfort measures only documented

• Enrolled in clinical trials related to stroke

• Admitted for elective carotid intervention

• Discharged to another hospital

• Left against medical advice

• Expired

• Discharged to home for hospice care

• Discharged to a health care facility for hospice care

• Documented reason for not prescribing antithrombotic therapy at discharge

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-21; M-2; L-0; I-0;** 1b. Performance Gap: **H-0; M-0; L-18; I-5**

Rationale:

- The developer's presentation of evidence demonstrating that discharging the appropriate patients on antithrombotic therapy reduces subsequent stroke mortality and morbidity remained strong and unchanged from the previous endorsement. The Committee accepted the prior evaluation without further discussion on evidence.
- The Committee agreed that there was very little room for improvement, with a 98% rate of compliance for the 10$^{th}$ percentile. Because the measure did not meet the performance gap criterion, the Committee considered the measure for inactive endorsement with reserve status.
- The Committee expressed concern with the lack of disparities data because there are known disparities in stroke risk.

**2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria**

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

| 0435 STK 02: Discharged on Antithrombotic Therapy |
|---|
| 2a. Reliability: **H-12; M-10; L-0; I-0;** 2b. Validity: **H-16; M-7; L-0; I-0**<br>Rationale:<br>• The Committee reviewed previous reliability testing results; the inter-rater reliability of data elements in 77 hospitals and 739 patient records showed an overall agreement rate of 97.61%. Kappa scores were not presented.<br>• One Committee member expressed concern with the data element 'Reason for Not Prescribing Antithrombotic Therapy at Discharge'. Some measure users have cautioned that the data element may not capture all the appropriate patients. A Committee member raised concern with the frequency with which the listing of acceptable drugs was updated (e.g., new drugs approved or not approved) by the Food and Drug Administration. The Committee noted it would be difficult to assess validity.<br>• During workgroup discussions of this measure, the Committee questioned the large percentage of clients excluded due to hospice. At the in-person meeting, the developer presented corrected exclusion data showing that 1.29% of patients had been discharged to hospice; the Committee accepted the new data. |
| **3. Feasibility: H-11; M-12; L-0; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• The Committee agreed the measure was feasible using medical record abstraction as the data source but noted that some data elements are in electronic form. |
| **4. Usability and Use: H-19; M-4; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The Committee agreed that the measure met the usability and use criterion. A Committee member also noted that improved performance on this measure could be attributed to Get with the Guidelines reporting requirements. |
| **5. Related and Competing Measures**<br>• Measure #0435 and #0438 STK05 Antithrombotic Therapy by End of Hospital Day Two are related measures; they assess the same patient populations and similar measure focus. However, the timeframe for antithrombotic administration is specified differently in the two measures. Measure #0435 focuses on the prescription of antithrombotic medications at the time of hospital discharge, while #0438 focuses on the delivery of antithrombotic therapy administered by the end of hospital day two for ischemic stroke patients.<br>• In 2012, the Committee suggested that the developer develop a composite measure that included #0435 and #0438; this composite measure would assess the percentage of patients who receive appropriate care at both time points, and therefore provide more opportunity for improvement.<br>• During the post in-person meeting call, the Committee again stated its earlier suggestion to combine the measures. However, both #0435 and #0438 have been recommended for inactive endorsement with reserve status. A combined measure would have to be submitted as a new measure.<br>• Measure #0435 is also related to #0068 Ischemic Vascular Disease: use of Aspirin or Another Antiplatelet in that they look at patients prescribed antithrombotics. However, #0068 focuses on patients with an acute myocardial infarction, coronary artery bypass graft, or percutaneous coronary intervention. |
| **Standing Committee Recommendation for Inactive Endorsement with Reserve Status**: **Y-20; N-3** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

## 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter

Submission | Specifications

**Description**: This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.

**Numerator Statement**: Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge.

**Denominator Statement**: Ischemic stroke patients with documented atrial fibrillation/flutter.

**Exclusions**: • Less than 18 years of age

• Length of Stay > 120 days

• Comfort measures only documented

• Enrolled in clinical trials related to stroke

• Admitted for elective carotid intervention

• Discharged to another hospital

• Left against medical advice

• Expired

• Discharged to home for hospice care

• Discharged to a health care facility for hospice care

• Documented reason for not prescribing anticoagulation therapy at discharge

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation;** 1b. Performance Gap: **H-0; M-6; L-17; I-0**

Rationale:

- The developer submitted evidence during the prior endorsement review, citing the recommendation for anti-coagulation therapy at discharge. The developer also noted that in addition to warfarin, direct oral anti-coagulants have been approved by the FDA and have been included on the list of acceptable drugs for inclusion in the numerator. The Committee agreed that the data that demonstrates the effect of anti-coagulants on the reduction of stroke risk is well established. Without further discussion, the Committee accepted the prior evaluation on evidence.
- While the Committee noted the importance of this measure, they also recognized that there is minimal opportunity for improvement; performance rates in CY 2015 were 97%. Because the measure did not meet the performance gap criterion, the Committee considered the measure for inactive endorsement with reserve status.

**2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria**

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

## 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter

2a. Reliability: **H-3; M-20; L-0; I-0;** 2b. Validity: **H-6; M-17; L-0; I-0**

Rationale:

- Committee members noted that the numerator had changed with the addition of new anticoagulant therapies and questioned how many more clients had been captured in the numerator. The Committee also questioned how long it took for patients to be added to the numerator from when new anticoagulants were approved. The developer responded that once anticoagulants become FDA approved, they are added to the VTE prophylaxis data element during the next update of the tool.
- During workgroup discussions of this measure, the Committee questioned the large percentage of clients excluded due to discharges to hospice. At the in-person meeting, the developer presented corrected exclusion data showing that 1.26% of patients had been discharged to hospice. A Committee member also questioned why discharge to another hospital was included as an exclusion for this measure.

**3. Feasibility: H-8; M-15; 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 chart reivew is required to populate the measure, overall the Committee believed the measure met the feasibility criterion.

**4. Usability and Use: H-17; M-6; L-0; I-0**

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

Rationale:

- This measure is currently publicly reported in the CMS Hospital IQR program and Hospital Compare.

**5. Related and Competing Measures**

- Measure #0436 has been recommended for inactive endorsement with reserve status; however, it is related to #1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy. The target population in measure #1525 differs from #0436 in that the denominator includes all patients aged 18 and older with a diagnosis of nonvalvular atrial fibrillation or atrial flutter. Measure #1525 is not only specified for ischemic stroke patients with atrial fibrillation/flutter.

**Standing Committee Recommendation for Endorsement with Reserve Status**: **Y-22; N-1**

**6. Public and Member Comment**

-

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two

Submission | Specifications

**Description**: This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1).

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-6: Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.

**Numerator Statement**: Ischemic stroke patients who had antithrombotic therapy administered by

end of hospital day two.

**Denominator Statement**: Ischemic stroke patients

**Exclusions**: • Less than 18 years of age

• Duration of Stay < 2 days

• Length of Stay > 120 days

• Comfort measures only documented on the day of or day after hospital arrival

• Enrolled in clinical trials related to stroke

• Admitted for elective carotid intervention

• IV OR IA thrombolytic therapy administered at this hospital or within 24 hours prior to arrival

• Documented reason for not administering antithrombotic therapy by end of hospital day 2

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation;** 1b. Performance Gap: **H-0; M-3; L-20; I-0**

<u>Rationale</u>:

- The developer reviewed evidence submitted at the last endorsement review, citing numerous clinical studies, which highlight the benefit of early antithrombotic therapy in reducing stroke mortality and morbidity. The Committee agreed to accept the prior evaluation on evidence without further discussion.
- In discussing opportunity for improvement, a Committee member noted that the mean hospital performance on this measure has remained at 98% since 2012. The developer did not submit disparities data; the Committee believed those data might yield opportunities for improvement across and within subpopulations. Because the measure did not pass performance gap, the Committee considered inactive endorsement with reserve status.

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

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

2a. Reliability: **Accepted Prior Evaluation;** 2b. Validity: **H-13; M-10; L-0; I-0**

<u>Rationale</u>:

- The Committee reviewed the prior reliability data showing a 97% agreement rate of tested data elements in 77 hospitals and 739 patient records. The Committee accepted the prior evaluation on reliability.
- The developer presented new validity data showing a positive correlation with six other stroke measures, in over two million patient records at 1,300 hospitals. Two new exclusions were added to this measure: the first, 'Patients with IV or IA Thrombolytic Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival.' The developer noted that this element would account for patients transferred in from other centers; and the second, 'Patients with a documented Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2.'

**3. Feasibility: H-5; M-18; L-0; I-0**

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

<u>Rationale</u>:

- The Committee acknowledged that the measure had been in place for several years; however, one

| 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
|---|
| member noted that the timing of the measure at 'hospital day two' was not a standard time frame for similar measures. The developer referenced the CAST trial that demonstrated the benefit of antithrombotic therapy within the first 48 hours. The developer further clarified that feedback from initial implementation of the measure found the time frame too difficult to capture; therefore the measure was then changed to 'hospital day two.' |
| **4. Usability and Use: H-19; M-4; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The Committee believed the measure met the usability and use criterion since it is currently publicly reported in the CMS IQR and Hospital Compare. |
| **5. Related and Competing Measures**<br>• Measure #0438 and measure #0435 Discharged on Antithrombotic Therapy are related measures. They have a similar measure focus and patient population. However, the timeframe for antithrombotic administration is different in both measures. Measure #0435 focuses on the prescription of antithrombotic medications at the time of hospital discharge, while #0438 focuses on the delivery of antithrombotic therapy administered by end of hospital day two for ischemic stroke patients.<br>• In 2012 the Committee suggested that the developer develop a composite measure that includes #0435 and #0438; this composite measure would assess the percentage of patients who receive appropriate care at both time points and therefore provide more opportunity for improvement.<br>• During the post in-person meeting call, the Committee restated their suggestion to develop a composite measure. However, both #0435 and #0438 have been recommended for inactive endorsement with reserve status. A combined measure would have to be submitted as a new measure.<br>• Measure #0438 is also related to measure #0068: Ischemic Vascular Disease: Use of Aspirin or Another Antiplatelet, however #0068 assesses patients with an acute myocardial infarction, CABG, or percutaneous coronary intervention, or who had a diagnosis of ischemic vascular disease. |
| **Standing Committee Recommendation for Endorsement with Reserve Status**: **Y-21; N-2** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 0441 STK-10: Assessed for Rehabilitation |
|---|
| Submission \| Specifications |
| **Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, and STK-8: Stroke Education) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.<br>**Numerator Statement**: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.<br>**Denominator Statement**: Ischemic or hemorrhagic stroke patients. |

## 0441 STK-10: Assessed for Rehabilitation

**Exclusions**: • Less than 18 years of age
• Length of Stay > 120 days
• Comfort measures only documented
• Enrolled in clinical trials related to stroke
• Admitted for elective carotid intervention
• Discharged to another hospital
• Left against medical advice
• Expired
• Discharged to home for hospice care
• Discharged to a health care facility for hospice care

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation;** 1b. Performance Gap: **H-0; M-2; L-21; I-0**

<u>Rationale</u>:

- The Committee agreed that the underlying rationale for the measure appears to be the same since the last NQF endorsement review. The Committee accepted the prior evaluation on evidence without further discussion.
- The developer provided performance scores based on data from 2010-2014. National hospital performance rates have been consistent at 98%, showing minimal opportunity for improvement.
- Because the measure failed on performance gap, the measure was eligible for consideration for inactive endorsement with reserve status.

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

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

2a. Reliability: **H-2; M-20; L-1; I-0;** 2b. Validity: **H-20; M-3; L-0; I-0**

<u>Rationale</u>:

- Inter rater-reliability of the data elements for one year (4Q2010-3Q2011) in 77 hospitals and 739 patient records showed an overall agreement rate of 98.3%.
- The Committee agreed there were no major changes in reliability since the last submission and that the new testing data continued to support reliability of the measure.
- Empirical validity testing, conducted at the measure score level with 1,318 hospitals and 2,206,379 patients records, generated p-values that show a statistically significant (P<.0001), positive correlation of this measure with six other stroke performance measures. These results support the hypothesis that hospitals with high quality on one stroke measure tend to have high performance on the other stroke measures.

**3. Feasibility: H-20; M-3; L-0; I-0**

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

<u>Rationale</u>:

- The required data elements are routinely generated and used during care delivery. The required data

| 0441 STK-10: Assessed for Rehabilitation |
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| elements are available in electronic form and should be ready for operational use. |
| **4. Usability and Use: H-20; M-3; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• This measure is currently in used in the CMS Hospital Compare and IQR program. No concerns regarding usability and use were noted. |
| **5. Related and Competing Measures**<br>No related or competing measures noted. |
| **Standing Committee Recommendation for Potential Reserve Status**: **Y-22; N-1** |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

## Measures with Endorsement Decision Deferred

The following measures submitted for the Standing Committee's review during the project have been deferred for future consideration:

### 0439 STK-06: Discharged on Statin Medication

Submission | Specifications

**Description**: This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.

**Numerator Statement**: Ischemic stroke patients prescribed statin medication at hospital discharge

**Denominator Statement**: Ischemic stroke patients

**Exclusions**: • Less than 18 years of age

- Length of Stay > 120 days
- Comfort measures only documented
- Enrolled in clinical trials related to stroke
- Admitted for elective carotid intervention
- Discharged to another hospital
- Left against medical advice
- Expired
- Discharged to home for hospice care
- Discharged to a health care facility for hospice care
- Documented reason for not prescribing statin medication at discharge

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation**; 1b. Performance Gap: **Deferred Vote**

Rationale:

- The Committee accepted the prior evaluation of this measure because they believed there was strong evidence that statin therapy prescribed at discharge improved outcomes for stroke patients.
- The developer stated that the performance gap data presented were based on the previous denominator, where all patients with an LDL greater than 100 mg/dL were included. The current measure includes all patients with an LDL greater than 70 mg/dL. The developer was unable to update the measure submission with the revised guidelines because the release of this new information did not coincide with NQF's measure submission deadline. Therefore the Committee agreed to defer review and voting on this measure.

0439 STK-06: Discharged on Statin Medication

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

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

2a. Reliability: **H-X**; **M-X**; **L-X**; **I-X;** 2b. Validity: **H-X**; **M-X**; **L-X**; **I-X**

<u>Rationale</u>:

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**3. Feasibility: H-X; M-X; L-X; I-X**

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

<u>Rationale</u>:

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**4. Usability and Use: H-X; M-X; L-X; I-X**

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

<u>Rationale</u>:

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**5. Related and Competing Measures**

Measure #0439 is related to the following measures:

- #0118 Anti-Lipid Treatment Discharge
- #0074 Chronic Stable Coronary Artery Disease: Lipid Control
- #1519 Statin Therapy at Discharge after Lower Extremity Bypass
- #0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet
- #0545 Adherence to Statins for Individuals with Diabetes Mellitus

These measures are related to #0439 but they address other diseases or specific surgical procedures. Specifically, measure #0118 is at the provider level and targets patients undergoing coronary artery bypass graft (CABG) in an ambulatory care setting; measure #0074 is also at the provider level and targets patients with a diagnosis of coronary artery disease in an ambulatory care setting; and #1519 focuses on clients undergoing lower extremity bypass surgery. Measure #0068 targets patients with an acute myocardial infarction, CABG, or percutaneous coronary intervention, or who had a diagnosis of ischemic vascular disease. Measure #0545 addresses adherence to statins for eligible patients with diabetes mellitus.

**Standing Committee Recommendation for Endorsement**: **Y-X**; **N-X**

<u>Rationale</u>

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**6. Public and Member Comment**

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

**8. Board of Directors Vote: Y-X; N-X**

**Rationale for deferral**

When reviewing the evidence to support this measure, the Committee noted that the denominator had changed since the last endorsement. The developer stated that the submitted disparities data were based on the previous denominator; the developer failed to present updated information for the Committee's consideration because of the timing of updated guidelines. The developer stated they may have one quarter's worth of data to submit to the Committee in May of 2016. Therefore, the Committee agreed to defer voting on this measure until the post-comment call on June 23, 2016.

## 2836 STK-06: Discharged on Statin Medication

Submission | Specifications

**Description**: This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-6, Discharged on Statin Medication, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.

**Numerator Statement**: Patients prescribed statin medication at hospital discharge.

**Denominator Statement**: Patients with a principal diagnosis of ischemic stroke.

**Exclusions**: Denominator Exclusions:

Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.

Patients with comfort measures documented.

Patients discharged to another hospital

Patients who left against medical advice

Patients who expired

Patients discharged to home for hospice care

Patients discharged to a health care facility for hospice care

Patients with an LDL-c of less than 70 mg/dL <30 days prior to arrival or any time during the hospital stay

Denominator Exceptions:

Patients with a reason for not prescribing statin medication at discharge.

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-X**; **M-X**; **L-X**; **I-X**; 1b. Performance Gap: **H-X**; **M-X**; **L-X**; **I-X;** Evidence Exception: **Y-X; N-X**

Rationale:

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**2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria**

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

2a. Reliability: **H-X**; **M-X**; **L-X**; **I-X;** 2b. Validity: **H-X**; **M-X**; **L-X**; **I-X**

Rationale:

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**3. Feasibility: H-X; M-X; L-X; I-X**

| 2836 STK-06: Discharged on Statin Medication |
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| *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• |
| **4. Usability and Use: H-X; M-X; L-X; I-X**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• |
| **5. Related and Competing Measures**<br>Measure #2836 is the eCQM version of Measure #0439 and therefore is also related to the following measures:<br>• #0118 Anti-Lipid Treatment Discharge<br>• #0074 Chronic Stable Coronary Artery Disease: Lipid Control<br>• #0068 Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet<br>• #1519 Statin Therapy at Discharge after Lower Extremity Bypass<br>• #0545 Adherence to Statins for Individuals with Diabetes Mellitus<br>These measures are related to #2836 but address other diseases or specific surgical procedures. Specifically, measure #0118 is at the provider level and targets patients undergoing coronary artery bypass graft (CABG) in an ambulatory care setting; measure #0074 is also at the provider level and targets patients with a diagnosis of coronary artery disease in an ambulatory care setting; and #1519 focuses on clients undergoing lower extremity bypass surgery. Measure #0068 targets patients with an acute myocardial infarction, CABG, or percutaneous coronary intervention, or who had a diagnosis of ischemic vascular disease. Measure #0545 addresses adherence to statins for eligible patients with diabetes mellitus. |
| **Standing Committee Recommendation for Endorsement**: **Y-X**; **N-X**<br>Rationale<br>• |
| **6. Public and Member Comment**<br>• |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **Rationale for deferral**<br>Measure #2836, has been re-specified into an electronic format from a previously endorsed legacy, paper-based measure (#0439). When reviewing evidence for measure #0439, the Committee noted that the denominator had changed since the last endorsement. The developer stated that submitted performance gap data were based on the previous denominator; the developer failed to present updated information for the Committee's consideration because of the timing of updated guidelines. The developer stated they may have one quarter's worth of data to submit to the committee in May of 2016. Therefore, the Committee agreed to defer voting on measure #0439, and this eMeasure, until the post-comment call on June 23, 2016. |

## Measure Recommended for Approval for Trial Use

### 2872 Dementia – Cognitive Assessment

Submission | Specifications

**Description**: Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period.

**Numerator Statement**: Patients for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period

Definition: Cognition can be assessed by the clinician during the patient´s clinical history. Cognition can also be assessed by direct examination of the patient using one of a number of instruments, including several originally developed and validated for screening purposes. This can also include, where appropriate, administration to a knowledgeable informant. Examples include, but are not limited to:

-Blessed Orientation-Memory-Concentration Test (BOMC)

-Montreal Cognitive Assessment (MoCA)

-St. Louis University Mental Status Examination (SLUMS)

-Mini-Mental State Examination (MMSE) [Note: The MMSE has not been well validated for non-Alzheimer´s dementias]

-Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)

-Ascertain Dementia 8 (AD8) Questionnaire

-Minimum Data Set (MDS) Brief Interview of Mental Status (BIMS) [Note: Validated for use with nursing home patients only]

-Formal neuropsychological evaluation

-Mini-Cog

**Denominator Statement**: All patients, regardless of age, with a diagnosis of dementia

**Exclusions**: Exceptions: Documentation of medical reason(s) for not assessing cognition (eg, patient with very advanced stage dementia, other medical reason)

Documentation of patient reason(s) for not assessing cognition

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

**Level of Analysis:** Clinician : Group/Practice, Clinician : Individual, Clinician : Team

**Setting of Care:** Ambulatory Care : Clinician Office/Clinic, Behavioral Health/Psychiatric : Inpatient, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility, Other, Ambulatory Care : Urgent Care

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record

**Measure Steward**: Physician Consortium for Performance Improvement (PCPI)

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-6; M-11; L-0; I-1**; 1b. Performance Gap: **H-14; M-4; L-0; I-0;**

Rationale:

- The intent of the measure is to encourage initial and ongoing cognitive assessments in patients with any type of dementia across care settings. A Committee member questioned how the information was used to influence decisions about patient care.
- Another Committee member noted that cognitive assessment for patients with dementia is already in place through annual Medicare wellness visits.
- The Committee acknowledged that the 63.93% performance rate indicated a strong gap in performance. They also requested that the developer collect disparities data during trial use of the measure.

| 2872 Dementia – Cognitive Assessment |
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| **2. Scientific Acceptability of Measure Properties:** This e-measure is a candidate for eMeasure Approval for Trial Use; therefore, testing for the measure will be submitted at a later time**.** (2b1. Specifications consistent with evidence)<br>**eMeasure Trial Measure Specifications: H-6; M-11, L-0; I-0**<br>This measure may be considered for endorsement after sufficient data to assess reliability and validity have been submitted to NQF, within three years of approval.<br>Rationale:<br>• The Committee discussed whether the measure specifications were consistent with the evidence. A Committee member questioned the wording of the numerator that indicated the assessment had to be performed and reviewed. The developer responded that they are particularly interested in whether or not the assessment was performed. Overall, the Committee agreed that the measure specifications were adequate and that the measure could be recommended for Approval for Trial Use. |
| **3. Feasibility: H-8; M-8; L-1; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• The Committee accepted that the measure was feasible since it was tested with an electronic health record (EHR) vendor and a national network of post-acute care facilities, both providing favorable reports on feasibility.<br>• A Committee member questioned whether the measure would be feasible in acute care and primary care settings. The developer assumes the measure would be feasible in those environments since the two EHR vendors that tested feasibility also allow the EHR system to be used in ambulatory care settings and physicians' offices. |
| **4. Usability and Use: H-10; M-7; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The measure is currently used in the CMS PQRS and Meaningful Use Stage 2 programs. Without further discussion, the Committee agreed that the measure met the usability and use criterion. |
| **5. Related and Competing Measures**<br>• No related or competing measures noted. |
| **Standing Committee Recommendation for eMeasure Approval for Trial Use**: **Y-17; N-0** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

## Measures Where Consensus Is Not Yet Reached

### 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis

Submission | Specifications

**Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.

**Numerator Statement**: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.

**Denominator Statement**: Ischemic or hemorrhagic stroke patients

**Exclusions**:

- Less than 18 years of age
- Length of Stay < 2 days
- Length of Stay > 120 days
- Comfort measures only documented on day of or day after hospital arrival
- Enrolled in clinical trials related to stroke
- Admitted for elective carotid intervention

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Paper Medical Records

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

**1. Importance to Measure and Report: Consensus not Reached on the Importance criteria**

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

1a. Evidence: **H-18; M-5; L-0; I-0**; 1b. Performance Gap: **H-0; M-2; L-12; I-9**

Rationale:

- The Committee reviewed the evidence submitted from the prior review and noted that mobile patients are not listed in the exclusions, although the measure applies to immobilized patients. The developer confirmed that mobile patients would be excluded from this measure.
- During the discussion of gaps in care, the Committee agreed there was little room for improvement with 23% of hospitals conforming to the measure specification at a mean performance of 96% in 2014.
- Disparities data were not submitted, although there are known disparities among ethnic minorities. The developer collects race and ethnicity data but does not report that information. During the meeting, the developer was able to verbally confirm that there were no statistically significant differences with regard to race among individual hospitals. The Committee did not reach consensus on this criterion.

**2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria**

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

2a. Reliability: **H-6; M-16; L-1; I-0;** 2b. Validity: **H-15; M-5; L-0; I-0**

Rationale:

- In reviewing reliability of this measure, Committee members noted that reliability testing had not been

| 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
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| done on patients who were in the numerator but did not receive the medication. The developer responded that reliability testing could not be completed for these patients because of data collection challenges.<br>• Another Committee member asked for clarification on the 120 day and stroke trial exclusions. The developer responded that the 120 day time frame is based on CMS regulations; this ensures that patients are not double billed for extended stays. The clinical trial exclusion was included because the developer assumed that patients enrolled in clinical trials may not follow the recommended therapy. |
| **3. Feasibility: H-17; M-6; L-0; I-0**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• The Committee agreed all data elements are in defined fields and generated or collected and used by healthcare personnel during the provision of care. |
| **4. Usability and Use: H-21; M-2; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• This measure is publicly reported on The Joint Commission's Quality Check and in CMS Hospital Compare. |
| **5. Related and Competing Measures**<br>Measure #0434 is related to #0239 Venous Thromboembolism (VTE) Prophylaxis and #0371 Venous Thromboembolism Prophylaxis; both focus on the administration of VTE. However, #0239 and #0371 both target patients who have undergone or are undergoing surgical procedures, while this measure focuses only on hemorrhagic and ischemic stroke patients. |
| **Standing Committee Recommendation for Endorsement**: **No vote taken.**<br>Rationale:<br>• The Committee agreed to wait for additional data from the developer before voting on overall suitability for endorsement. This information will be presented on the Post-Comment call on June 23, 2016; the Committee will vote on the measure during the call or soon afterwards. |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 1814 Counseling for Women of Childbearing Potential with Epilepsy |
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| Submission \| Specifications |
| **Description**: All female patients of childbearing potential (12–44 years old) diagnosed with epilepsy who were counseled or referred for counseling for how epilepsy and its treatment may affect contraception OR pregnancy at least once a year<br>**Numerator Statement**: Female patients or caregivers counseled* at least once a year about how epilepsy and its treatment may affect contraception OR pregnancy.<br>*Counseling should include a discussion about folic acid supplementation, contraception, potential anti-seizure medications effect(s) on pregnancy, safe pregnancies, and breastfeeding.<br>**Denominator Statement**: All females of childbearing potential (12-44 years old) with a diagnosis of epilepsy.<br>**Exclusions**: Excluded: patients diagnosed with menopause or surgically sterile. |

| 1814 Counseling for Women of Childbearing Potential with Epilepsy |
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| Exceptions:<br>Patient has a diagnosis of neurodevelopmental disorder, encephalopathy, hydrocephalus, brain injury, or cerebral palsy.<br>Patient has a diagnosis of severe cognitive impairment or severe intellectual disability.<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Clinician : Group/Practice<br>**Setting of Care:** Ambulatory Care : Clinician Office/Clinic<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data : Electronic Health Record, Paper Medical Records<br>**Measure Steward**: American Academy of Neurology |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>**<br>(1a. Evidence, 1b. Performance Gap)<br>1a. Evidence: **H-0; M-2; L-3; I-15**; 1b. Performance Gap: **H-17; M-2; L-1; I-0;** Evidence Exception: **Y-18; N-2**<br><u>Rationale</u>:<br>• The Committee reviewed updated evidence for this measure but questioned whether there was direct evidence that counseling leads to improved outcomes in women with epilepsy. A Committee member questioned the absence of data for this maintenance measure.<br>• A Committee member also questioned the difference between counseling women with epilepsy and counseling women in general, and whether the measure could be used to influence providers' behaviors. Another Committee member stated that counseling did not have an impact on pregnancy.<br>• The measure did not pass on the evidence criterion but the Committee did vote on the exception to the lack of empirical evidence.<br>• The Committee reviewed data that show less than 40% of women received counseling about epilepsy and epilepsy treatment. The Committee agreed this measure showed sufficient opportunity for improvement. |
| **2. Scientific Acceptability of Measure Properties: <u>Consensus not Reached for Scientific Acceptability</u>**<br>(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)<br>2a. Reliability: **H-0; M-11; L-3; I-6;** 2b. Validity: **H-0; M-13; L-2; I-4**<br><u>Rationale</u>:<br>• Reliability testing was conducted using data element validity testing at three neurology practices. The Committee questioned whether testing in three practices was sufficient and why the developer had not re-tested the measure in three new practices to determine if a problem identified with exclusion criteria had been resolved. The Committee could not reach consensus on the reliability criterion.<br>• In discussing validity, the Committee voiced concern over the exclusion for patients with intellectual disability, which they believed was open to interpretation. The developer revised the measure to clarify which patients would meet the intellectual disability exclusion criteria.<br>• A Committee questioned how the various modes of counseling outlined in the measure are distinguished from one another. Ultimately, the Committee believed the measure met the validity criterion. |
| **3. Feasibility: H-0; M-17; L-1; I-1**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br><u>Rationale</u>:<br>• The Committee questioned how data are pulled from the electronic health record without additional burden of completing a chart review. The developer explained that a data dictionary was created to capture the variations of words that could be used for each data element rather than those explicitly listed in the measure.<br>• The Committee noted that participating sites could generate the required data elements; one facility, |

| 1814 Counseling for Women of Childbearing Potential with Epilepsy |
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| however, reported difficulty with this. |
| **4. Usability and Use: H-2; M-16; L-0; I-0**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• The measure is currently in use within the CMS PQRS. |
| **5. Related and Competing Measures**<br>• No related or competing measures noted. |
| **Standing Committee Recommendation for Endorsement**: **Y-12; N-6**<br>Rationale:<br>• The measure did not pass the evidence criterion; however, it passed on the exception to empirical evidence criterion.<br>• The Committee could not reach consensus on reliability, a must pass criterion. The Committee will revote on the measure during the Post Comment call on June 23, 2016 |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2834 STK 04: Thrombolytic Therapy |
|---|
| Submission \| Specifications |
| **Description**: This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-4, Thrombolytic Therapy, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.<br>**Numerator Statement**: Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of when it was witnessed or reported that the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>**Denominator Statement**: Ischemic stroke patients admitted through the Emergency Department whose time of arrival is within 2 hours (less than or equal to 120 minutes) of the 1) time they were known to be at their baseline state of health; or 2) time of symptom onset if time last known at baseline state is not known.<br>**Exclusions**: Denominator Exclusions: None.<br>Denominator Exceptions:<br>• Patients with comfort measures documented on the day of or the day after arrival<br>• Patients with intra-venous or intra-arterial Thrombolytic (t-PA) Therapy prior to arrival<br>• Patients with documentation of a National Institutes for Health Stroke Scale (NIHSS) score of zero in the emergency department |

## 2834 STK 04: Thrombolytic Therapy

- Patients with Medical Reasons for not initiating IV thrombolytics documented by a physician/APN/PA or pharmacist on the day of or the day after arrival
- Patients with any of the following results within 180 minutes of the 1) time they were known to be at their baseline state of health; or 2) time of symptom onset:
- Prothrombin Time > 15 seconds
- Platelet Count <100,000
- INR >1.7
- Partial Thromboplastin Time > 40 seconds
- Systolic Blood Pressure > 185 mmHg
- Diastolic Blood Pressure > 110 mmHg
- Patient refusal

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Accepted Prior Evaluation**; 1b. Performance Gap: **Accepted Prior Evaluation**

<u>Rationale</u>:

- The developer reported that the evidence and opportunity for improvement was identical to the legacy, paper-based measure (#0437 STK04: Thrombolytic Therapy), with the exception of additional exclusions in the electronic version. The Committee then accepted the prior evaluation of this measure on evidence and opportunity for improvement.

**2. Scientific Acceptability of Measure Properties: <u>Consensus not Reached on the Scientific Acceptability criteria</u>**

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

2a. Reliability: **H-0; M-10; L-8; I-5;** 2b. Validity: **H-4; M-14; L-2; I-3**

<u>Rationale</u>:

- The Committee expressed concern that the eMeasure had not been tested in more than one electronic health record as required by NQF standards. NQF staff clarified that that requirement applied to non-legacy measures and that this measure would be considered a legacy measure since the registry version is in use in federal programs.
- A Committee member disagreed that BONNIE testing was acceptable to meet reliability testing standards. NQF staff clarified that if the developer demonstrates data element validity, then additional reliability testing is not required. It was also stated that in the case of this measure, the developer initially had not submitted data on threats to validity. The developer was able to provide this information to the Committee prior to the in-person meeting.
- Another Committee member sought clarity on the wording of the denominator 'time of symptom onset if time last known at baseline state is not known.' The member pointed out that this wording differed from the registry measure denominator statement 'time last known well.' The developer explained that in order to better specify time last known well in the electronic health record, both data elements were included to capture time last known well. The Committee did not reach consensus on the reliability criterion.
- The Committee accepted BONNIE testing for measure validity, which included testing in synthetic patient

records. One Committee member asked if patients under age 18 were excluded from the measure. The developer confirmed that patients under 18 were excluded. The Committee passed the measure on validity.

**3. Feasibility: H-0; M-6; L-1; I-16**

*(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 developer stated that hospitals reporting on this measure attested to the eCQM specifications, indicative of the feasibility of the measure. However, the Committee felt they could not assess feasibility without real-world data. NQF staff stated that a feasibility report was created in lieu of a score card. Staff also clarified that the feasibility assessment was based on BONNIE performance and demonstrated the measure logic was functional. A Committee member then questioned whether evidence that the measure can be implemented in a real electronic health record was required for feasibility, to which NQF staff stated that it was not required for a legacy measure.
- A Committee member asked for further clarity on the synthetic testing and how it is applied in the real world. The developer stated that the BONNIE testing was a proxy for feasibility because it confirms that the measure logic is accurate in all permutations of the data.
- Another Committee member questioned how confirming feasibility through the measure logic differed from validity. The developer responded that CMS had collected data on this measure for some time and that changes have been made to the measure to improve feasibility. The Committee did not pass the measure on feasibility.

**4. Usability and Use: H-2; M-11; L-4; I-6**

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

Rationale:

- A Committee member stated that usability and use for this measure did not differ much from the registry measure but another member raised concern about the unintended consequences of treating patients experiencing stroke mimics. The Committee did not reach consensus on this criterion.

**5. Related and Competing Measures**

Measure #2834 is the eCQM version of #0437, and is therefore also related to #1952 Time to Intravenous Thrombolytic Therapy and #0288 Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival. These measures have a similar measure population and focus, but #1952 focuses on the timely administration of tPA rather than whether tPA should be administered for eligible patients (i.e., there could be varying reasons that a client is not treated within 60 minutes). The developer stated that measure #0437 and #1952 have been harmonized to the extent possible. Measure #0288 is focused on patients with acute myocardial infarction receiving fibrinolytic therapy.

**Standing Committee Recommendation for Endorsement**: **Y-4; N-19**

- The Committee could not reach consensus on reliability, a must pass criteria. The Committee will revote on the measure during the Post Comment call on June 23, 2016.

**6. Public and Member Comment**

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity

Submission | Specifications

**Description**: This stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This is a newly developed measure with a cohort and outcome that is harmonized with CMS' current publicly reported claims-based stroke mortality measure and includes the National Institutes of Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. This measure uses Medicare fee-for-service (FFS) administrative claims for the cohort derivation, outcome, and risk adjustment.

**Numerator Statement**: The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke.

**Denominator Statement**: The cohort includes inpatient admissions to all non-federal, short-term, acute care hospitals for Medicare FFS patients age 65 years and older with a principal discharge diagnosis of acute ischemic stroke. Additional details are provided in S.9 Denominator Details.

**Exclusions**: The measure excludes admissions for patients:

1. With inconsistent or unknown vital status or other unreliable data;

2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and

3. Discharged against medical advice (AMA).

For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort.

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

**Level of Analysis:** Facility

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Outcome

**Data Source**: Administrative claims, Other, Electronic Clinical Data : Registry

**Measure Steward**: Centers for Medicare & Medicaid Services (CMS)

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **Y-19; N-0**; 1b. Performance Gap: **H-7; M-12; L-3; I-0**

Rationale:

- The developer highlighted studies demonstrating that appropriate, guideline-recommended care and timely treatment for stroke patients can reduce the risk of mortality within 30 days of hospital admission.
- The Committee agreed the evidence provided adequately supported the measure focus; however, questioned whether mortality is a valid quality indicator for stroke.
- The developer provided risk-standardized mortality rates using two data sources: July 2011 – June 2014 Medicare Administrative claims and 2013 AHA/ASA Get with the Guidelines-Stroke Registry. Both values for the NIHSS were obtained from the registry as a surrogate for NIHSS scores that will be obtained from ICD-10 codes beginning in October 2016. The mean mortality rates display further opportunity for improvement at 14.5%.
- The developer also presented disparities data using three subpopulations (Dual Eligibles, African Americans and AHRQ SES index) and at the hospital level, showing minimal differences in the mortality rates across hospitals.

2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity

**2. Scientific Acceptability of Measure Properties: Consensus Not Reached on the Scientific Acceptability criteria**
(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)
2a. Reliability: **H-1; M-17; L-1; I-3;** 2b. Validity: **H-0; M-13; L-8; I-1**
Rationale:

- The Committee reviewed the Landis and Koch classification for intra-class-correlation coefficients (ICC) in considering the reliability of the measure. The developer noted they could compare data from claims and registry to ensure that the NIH stroke scale assessment is accurately captured. The Committee discussed the ICC value of .55, meaning that just over half of the variance in scores was due to differences between hospitals. The Committee wanted to ensure that hospitals of varying sizes were not being mischaracterized by using the ICC. The developer explained they create an interval estimate to protect against mischaracterization of facilities. The Committee questioned if reliability testing had to be performed using the other half of the case volume to determine if hospitals would fall into the same classification. There was also discussion on how the ICC value compares to myocardial infarction, pneumonia and heart failure mortality measures, to which the developer reported that it was similar.
- The Committee noted that face validity with expert opinion and feedback that the NIHSS is an important tool speaks to the measure validity.
- On the other hand, there were several issues raised on validity. Specifically, the Committee reviewed empiric validity testing of the measure score that compared the performance of the risk models for this measure to a similar stroke mortality measure employing data from Get with the Guidelines. Results displayed a c-statistic of 0.8120 and 0.7939, respectively which showed that both models have a similar discriminating ability to identify the correct patient. A Committee member noted that this testing assumes that the same information pulled from claims (this measure) would be mimicked when pulling from the registry (the similar measure).
- The Committee also weighed whether the measure was truly assessing quality if patient preferences (e.g., patients with comfort measures are not listed as exclusions) had not been considered. They also noted that if patient preferences are not excluded and the patient dies then the death would count against the hospital. This led to a larger concern of the Committee as to whether the measure is actually measuring facility preferences rather than quality of care.
- In regard to missing data, 17% of NIHSS stroke scale scores were missing and the Committee voiced concern that facilities may have an incentive to not document the stroke scale score, since multiple imputation could be used to make up for the missing scores.
- The Committee also noted that the SDS factor race was not included in the final risk adjustment model. Although the data presented showed African Americans as having the lowest risk for mortality with an odds ratio of .62, the Committee noted this group also has preferences for more aggressive treatment, which could explain the lower mortality.
- Finally, the Committee considered additional factors that could vary at the hospital level such as early 'Do not resuscitate' orders, which are a larger predictor of mortality than age. The Committee again felt that the measure could be measuring hospital preferences and not quality.

| 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity |
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| **3. Feasibility: H-8; M-11; L-2; I-1**<br>*(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)*<br>Rationale:<br>• Committee members acknowledged that the data elements are collected based on claims data, and generated or collected by healthcare providers. |
| **4. Usability and Use: H-0; M-18; L-3; I-1**<br>*(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)*<br>Rationale:<br>• This measure is not currently in use in any public reported or accountability programs. However, CMS intends to implement this measure in the Hospital IQR program once the new NIH Stroke Scale ICD-10 codes have been in use for three years. This measure requires three years of claims data for calculation. Once one of the new measures (either the claims-based or hybrid measure) is implemented, it could replace the currently reported Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure.<br>• The Committee noted concerns of unintended consequences due to uncertainties as to how this measure would perform in the real world. They also noted that there seemed to be an incentive not to document NIHSS stroke scale scores. |
| **5. Related and Competing Measures**<br>• Measure #2876 and #2877 Hybrid hospital 30-day, all-cause, risk standardized mortality rate following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity are competing measures as they have the same patient populations and the same focus (ischemic stroke patients and 30-day mortality).<br>• Measure #2876 uses administrative claims data for risk adjustment. The developer noted that #2876 is otherwise harmonized with #2877.<br>• Measure #2876 is also related to #0467 Acute Stroke Mortality rate because the focus is on mortality in acute stroke patients. However, measure #0467 captures in hospital deaths per 1,000 discharges with acute stroke as the principal diagnosis for individuals aged 18 and older. Measure #2876 is a 30-day all cause RSMR including Medicare patients, aged 65 and older in the denominator. |
| **Standing Committee Recommendation for Endorsement**: **Y-17; N-5**<br>Rationale<br>• The Committee could not reach consensus on validity, a must pass criteria. The Committee will revote on the measure during the Post Comment call on June 23, 2016 |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

## Measures Not Recommended

### 2832 STK 02: Discharged on Antithrombotic Therapy

Submission

**Description**: This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.

This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-2, Discharged on Antithrombotic Therapy, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.

**Numerator Statement**: Patients prescribed antithrombotic therapy at hospital discharge.

**Denominator Statement**: Patients with a principal diagnosis of ischemic stroke.

**Exclusions**: Denominator Exclusions:

Patients with comfort measures documented.

Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.

Patients discharged to another hospital

Patients who left against medical advice

Patients who expired

Patients discharged to home for hospice care

Patients discharged to a health care facility for hospice care

Denominator Exceptions:

Patients with a documented reason for not prescribing antithrombotic therapy at discharge.

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

**Level of Analysis:** Facility, Population : National

**Setting of Care:** Hospital/Acute Care Facility

**Type of Measure**: Process

**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy

**Measure Steward**: The Joint Commission

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-21; M-2; L-0; I-0**; 1b. Performance Gap: **H-0; M-0; L-18; I-5**

Rationale:

- This measure has been re-specified from a legacy, paper-based measure (#0435) into an eMeasure. The legacy registry measure did not pass the criterion for opportunity for improvement. Using the same data from the legacy measure to review this eMeasure, the Committee also believed this measure did not demonstrate an opportunity for improvement. Therefore, the measure was not recommended for endorsement.

**Standing Committee Recommendation for Endorsement**: **No Vote Taken**

**6. Public and Member Comment**

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

| 2832 STK 02: Discharged on Antithrombotic Therapy |
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| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2833 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
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| Submission |
| **Description**: This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-3, Anticoagulation Therapy for Atrial Fibrillation/Flutter, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.<br>**Numerator Statement**: Patients prescribed anticoagulation therapy at hospital discharge.<br>**Denominator Statement**: Patients with a principal diagnosis of ischemic stroke, history of atrial ablation, and current or history of atrial fibrillation/flutter.<br>**Exclusions**: Denominator Exclusions:<br>Patients with comfort measures documented.<br>Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.<br>Patients discharged to another hospital.<br>Patients who left against medical advice.<br>Patients who expired.<br>Patients discharged to home for hospice care.<br>Patients discharged to a health care facility for hospice care.<br>Denominator Exceptions:<br>Patients with a documented reason for not prescribing anticoagulation therapy at discharge.<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population : National<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy<br>**Measure Steward**: The Joint Commission |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: The measure does not meet the Importance criteria**<br>(1a. Evidence: 1b. Performance Gap)<br>1a. Evidence: **Accepted Prior Evaluation**; 1b. Performance Gap: **H-0; M-6; L-17; I-0**<br>Rationale:<br>• This measure has been re-specified from a legacy, paper-based measure (#0436) into an eMeasure. The legacy registry measure did not pass the criterion for opportunity for improvement. Using the same data from the legacy measure to review this eMeasure, the Committee also believed this measure did not demonstrate an opportunity for improvement. Therefore, the measure was not recommended for |

| 2833 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
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| endorsement. |
| **Standing Committee Recommendation for Endorsement**: **No Vote Taken** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2835 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
|---|
| Submission |
| **Description**: This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1).<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-6: Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-5, Antithrombotic Therapy By End of Hospital Day Two, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.<br>**Numerator Statement**: Patients who had antithrombotic therapy administered the day of or day after hospital arrival.<br>**Denominator Statement**: Patients with a principal diagnosis of Ischemic stroke.<br>**Exclusions**: Denominator Exclusions:<br>• Patients who have a duration of stay less than 2 days<br>• Patients with comfort measures documented on day or the day after arrival<br>• Patients with intra-venous or intra-arterial Thrombolytic (t-PA) Therapy administered within 24 hours prior to arrival or anytime during hospitalization.<br>Denominator Exceptions:<br>• Patients with a documented reason for not administering antithrombotic therapy the day of or day after hospital arrival.<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population : National<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy<br>**Measure Steward**: The Joint Commission |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure does not meet the Importance criteria</u>**<br>(1a. Evidence: 1b. Performance Gap)<br>1a. Evidence: **Accepted Prior Evaluation**; 1b. Performance Gap: **H-0; M-3; L-20; I-0**<br><u>Rationale</u>:<br>• This measure has been re-specified from a legacy, paper-based measure (#0438) into an eMeasure. The legacy registry measure did not pass the criterion for opportunity for improvement. Using the same data from the legacy measure to review this eMeasure, the Committee also felt this measure did not |

| 2835 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| demonstrate an opportunity for improvement. Therefore, the measure was not recommended for endorsement. |
| **Standing Committee Recommendation for Endorsement**: **No Vote Taken** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2837 STK-10: Assessed for Rehabilitation |
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| Submission |
| **Description**: This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay. This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, and STK-8: Stroke Education) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs.<br>**Numerator Statement**: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.<br>**Denominator Statement**: Patients age 18 and older discharged from inpatient care (non-elective admissions) with a principal diagnosis of ischemic or hemorrhagic stroke and a length of stay less or equal to 120 days.<br>**Exclusions**: Patients with comfort measures documented<br>Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.<br>Patients discharged to another hospital<br>Patients who left against medical advice<br>Patients who expired<br>Patients discharged to home for hospice care<br>Patients discharged to a health care facility for hospice care<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population : National<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record<br>**Measure Steward**: The Joint Commission |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure does not meets the Importance criteria</u>**<br>(1a. Evidence: 1b. Performance Gap)<br>1a. Evidence: **H-X**; **M-X**; **L-X; IE-X**; **I-X**; 1b. Performance Gap: **H-0; M-2; L-21; I-0**<br><u>Rationale</u>:<br>• This measure has been re-specified from a legacy, paper-based measure (#0441) into an eMeasure. The legacy registry measure did not pass the criterion for opportunity for improvement. Using the same data from the legacy measure to review this eMeasure, the Committee also felt this measure did not |

| 2837 STK-10: Assessed for Rehabilitation |
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| demonstrate an opportunity for improvement. Therefore, the measure was not recommended for endorsement. |
| **Standing Committee Recommendation for Endorsement**: **No Vote Taken** |
| **6. Public and Member Comment** |
| **7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X** |
| **8. Board of Directors Vote: Y-X; N-X** |
| **9. Appeals** |

| 2865 CSTK-02: Modified Rankin Score (mRS) at 90 Days |
|---|
| Submission **\| Specifications** |
| **Description**: Proportion of ischemic stroke patients age 18 years and older treated with intra-venous (IV) or intra-arterial (IA) thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) mRS is obtained via telephone or in-person.<br>This is the second measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate); CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible.<br>**Numerator Statement**: Ischemic stroke patients for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) mRS is obtained via telephone or in-person.<br>**Denominator Statement**: Ischemic stroke patients treated with IV or IA thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy.<br>**Exclusions**: • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients admitted for Elective Carotid Intervention<br>• Patients who expire during the hospital stay<br>**Adjustment/Stratification**: No risk adjustment or risk stratification.<br>**Level of Analysis:** Facility, Population : National<br>**Setting of Care:** Hospital/Acute Care Facility<br>**Type of Measure**: Process<br>**Data Source**: Electronic Clinical Data, Paper Medical Records<br>**Measure Steward**: The Joint Commission |
| **STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**<br>**1. Importance to Measure and Report: <u>The measure does not meet the Importance criteria</u>**<br>(1a. Evidence: 1b. Performance Gap)<br>1a. Evidence: **H-0; M-2; L-3; I-17**; Insufficient Evidence with Exception: **Y-11; N-11**; 1b. Performance Gap: **H-X**; **M-X**; **L-X**; **I-X**<br><u>Rationale</u>:<br>• The Committee noted the measure cited expert opinion and not systematic review of the evidence in support of the 90 day time period for follow up. The developer noted that the 90 day timeframe was chosen based on the NINDS-tPA trial in 1996. |

## 2865 CSTK-02: Modified Rankin Score (mRS) at 90 Days

- The Committee debated the appropriateness of holding providers accountable for this measure in the absence of evidence that is linked to the outcome. After failing on evidence, the Committee moved to vote for exception to the empirical evidence criterion but failed to reach consensus. Therefore, the measure failed on this criterion and was not recommended for endorsement.

**Standing Committee Recommendation for Endorsement**: **No Vote Taken**

**6. Public and Member Comment**

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## 2870 Overuse of Opioid Containing Medications for Primary Headache Disorders

Submission | Specifications

**Description**: Percentage of patients aged 12 years and older diagnosed with primary headache disorder, and taking an opioid containing medication who were assessed for opioid containing medication overuse within the 12-month measurement period, and treated or referred for treatment if identified as overusing opioid containing medication.

**Numerator Statement**: Patients assessed for opioid containing medication overuse within the 12-month measurement period and treated or referred for treatment if identified as overusing opioid containing medication which is defined as: Using opioid containing medication for greater than or equal to 10 days per month for more than 2 months.

**Denominator Statement**: All patients aged 12 years and older diagnosed with a primary headache disorder* and taking opioid containing medication.

*Define Primary Headache: A headache that is not caused by another disease or medical condition. For the purpose of this measure this measure this includes the following types of headache:

Migraine - Migraine without aura, migraine with aura, childhood periodic syndromes that are commonly precursors of migraine, retinal migraine, complications of migraine, probable migraine.

Tension-Type Headache (TTH) - Infrequent episodic TTH, frequent episodic TTH headache, chronic TTH, probable TTH

Cluster Headache (CH) and Other Trigeminal Autonomic Cephalgias: Cluster headache, paraxysmal hemicrania, short-lasting unilateral neuralgia from headache attacks with conjuctival injection and tearing (SUNCT), probably trigeminal autonomic cephalgia

Other Primary Headaches: Primary stabbing headache, primary cough headache, primary exertional headache, primary headache associated with sexual activity, hypnic headache, primary thunderclap headache, hemicrania continua, new daily-persistent headache.

**Exclusions**: No Exclusions. Medical exceptions for not assessing, treating, or referring patient for treatment of opioid medication overuse include:Patient already assessed and treated for opioid use disorder within the last year. Patient has a documented failure of non-opioid options and is not identified as overusing opioid containing medication. Patient has contraindications to all other medications for primary headache.

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

**Level of Analysis:** Clinician : Individual

**Setting of Care:** Ambulatory Care : Clinician Office/Clinic, Emergency Medical Services/Ambulance, Hospital/Acute Care Facility, Ambulatory Care : Urgent Care

**Type of Measure**: Process

## 2870 Overuse of Opioid Containing Medications for Primary Headache Disorders

**Data Source**: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

**Measure Steward**: American Academy of Neurology

**STANDING COMMITTEE MEETING [04/04/2016-04/05/2016]**

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

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

1a. Evidence: **H-0**; **M-0**; **L-2**; **I-17**; 1b. Performance Gap: **No Votes Taken**

<u>Rationale</u>:

- This process measure was newly presented to the Committee and was submitted for the NQF Approval for Trial Use program. The developer provided a study of nearly 6,000 patients of which 15.9% were current users of opioids. The study found that rates of rebound headache and healthcare resource utilization were greater for opioid users than non-users.
- The Committee countered the evidence by stating that more intractable patients could have been prescribed opioids resulting in more rebound headaches and greater healthcare resource utilization. The Committee also acknowledged statements by the Centers for Disease Control and Prevention and the Food and Drug Administration, citing the risks of opioid prescriptions. Overall, the Committee believed there was not sufficient evidence to support this measure and did not recommend it for endorsement.

**2. Scientific Acceptability of Measure Properties**

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

2a. Reliability: **H-X; M-X; L-X; I-X;** 2b. Validity: **H-X; M-X; L-X; I-X**

**3. Feasibility: H-X; M-X; L-X; I-X**

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

**4. Usability and Use: H-X; M-X; L-X; I-X**

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

**5. Related and Competing Measures**

No related or competing measures identified.

**Standing Committee Recommendation for Endorsement**: **No vote taken.**

**6. Public and Member Comment**

- 

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

**8. Board of Directors Vote: Y-X; N-X**

**9. Appeals**

## Measures Withdrawn from Consideration

Five measures previously endorsed by NQF have not been re-submitted for maintenance of endorsement or have been withdrawn during the endorsement evaluation process. Endorsement for these measures has been removed.

| NQF # | Title | Federal Programs: Finalized as of 2014-2015 |
|---|---|---|
| 0240 | Stroke and Stroke Rehabilitation: Venous Thromboembolism (VTE) Prophylaxis for Ischemic Stroke or Intracranial Hemorrhage (American Academy of Neurology) | The developer is currently reviewing the measure set for updates. |
| 0241 | Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge (American Academy of Neurology | The developer is currently reviewing the measure set for updates. |
| 0243 | Stroke and Stroke Rehabilitation: Screening for Dysphagia (American Academy of Neurology) | The developer is currently reviewing the measure set for updates. |
| 0244 | Stroke and Stroke Rehabilitation: Rehabilitation Services Ordered (American Academy of Neurology) | The developer is currently reviewing the measure set for updates. |
| 0325 | Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy (American Academy of Neurology) | The developer is currently reviewing the measure set for updates. |

## Appendix B: NQF Neurology Portfolio and Related Measures

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| *Stroke*<br>(^ denotes the measure is within another NQF Portfolio)<br>(* denotes the measure was reviewed within a previous phase of the Neurology project) | | | | |
| 0434 | STK-01: Venous Thromboembolism (VTE) Prophylaxis | This measure captures the proportion of ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission. | The Joint Commission | Related to 0239^ and 0371^ |
| 0435 | STK 02: Discharged on Antithrombotic Therapy | This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge. | The Joint Commission | Related to 0068^ and 0438 |
| 0436 | STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge. | The Joint Commission | Related to 1525^ |
| 0437 | STK-04: Thrombolytic Therapy | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well. | The Joint Commission | Related to 0288^ , 0661 and competes with 1952 |
| 0438 | STK 05: Antithrombotic Therapy By End of Hospital Day Two | This measure captures the proportion of ischemic stroke patients | The Joint Commission | Related to 0068^, 0435 |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1). | | |
| 0439 | STK-06: Discharged on Statin Medication | This measure captures the proportion of ischemic stroke patients with LDL greater than or equal to 100 mg/dL, or LDL not measured, or who were on a lipid-lowering medication prior to hospital arrival who are prescribed statin medication at hospital discharge. | The Joint Commission | Related to 0118^, 0068^, 0074^, 0545^ and 1519^ |
| 0441 | STK-10: Assessed for Rehabilitation | This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay. | The Joint Commission | N/A |
| 0467* | Acute Stroke mortality Rate (IQI 7) | In-hospital deaths per 1,000 hospital discharges with acute stroke as a principal diagnosis for patients ages 18 years and older. Includes metrics for discharges grouped by type of stroke. Excludes obstetric discharges and transfers to another hospital. | Agency for Healthcare Research and Quality | Related to 2876, 2877 |
| 0507 | Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports | Percentage of final reports for carotid imaging studies (neck magnetic resonance angiography (MRA), | American Medical Association – Physician Consortium for Performance | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | neck computerized tomographic angiography (CTA), neck duplex ultrasound, carotid angiogram) performed that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement. | Improvement (AMA-PCPI) | |
| 0661 | Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival. | Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT or MRI scan performed during the stay and having a time from ED arrival to interpretation of the Head CT or MRI scan within 45 minutes of arrival. | Centers for Medicare & Medicaid Services | Related to 0437 |
| 1952 | Time to Intravenous Thrombolytic Therapy | Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door to needle time) of 60 minutes or less | American Heart Association/ American Stroke Association | Competes with 0437 |
| 2832 | STK 02: Discharged on Antithrombotic Therapy | This measure captures the proportion of ischemic stroke patients | The Joint Commission | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | prescribed antithrombotic therapy at hospital discharge. | | |
| 2833 | STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge. | The Joint Commission | N/A |
| 2834 | STK 04: Thrombolytic Therapy | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well. | The Joint Commission | Related to 1952 and 0288^ |
| 2835 | STK 05: Antithrombotic Therapy By End of Hospital Day Two | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well. | The Joint Commission | N/A |
| 2836 | STK-06: Discharged on Statin Medication | This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge. | The Joint Commission | Related to 0118^, 0068^, 0074^, 0545^ and 1519^ |
| 2837 | STK-10: Assessed for Rehabilitation | This measure captures the proportion of ischemic or | The Joint Commission | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay. | | |
| 2863 | CSTK-06: Nimodipine Treatment Administered | Proportion of subarachnoid hemorrhage (SAH) patients age 18 years and older for whom nimodipine treatment was administered within 24 hours of arrival at this hospital. | The Joint Commission | Related to 2866 |
| 2864 | CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | Proportion of ischemic stroke patients age 18 years or older for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., intra-venous thrombolytic therapy, or intra-arterial thrombolytic therapy, or mechanical endovascular reperfusion (MER) therapy) in patients undergoing recanalization therapy and documented in the medical record, or documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy. | The Joint Commission | Related to 2866 |
| 2865 | CSTK-02: Modified Rankin Score (mRS) at 90 Days | Proportion of ischemic stroke patients age 18 years and older treated with intra-venous (IV) or intra- | The Joint Commission | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | arterial (IA) thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) mRS is obtained via telephone or in-person. | | |
| 2866 | CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage and Intracerebral Hemorrhage Patients (Overall Rate) | Proportion of SAH and ICH stroke patients age 18 years or older for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention. | The Joint Commission | Related to 2864 |
| 2111 | Antipsychotic Use in Persons with Dementia | The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic | Pharmacy Quality Alliance | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | medication without evidence of a psychotic disorder or related condition. | | |
| 2876 | Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | This stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. | Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE) | Competes with 2877 and is related to 0467 |
| 2877 | Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity | This hybrid stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. | Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE) | Competes with 2876 and is related to 0467 |
| *Dementia*<br>(* denotes the measure was reviewed within a previous phase of the Neurology project) | | | | |
| 2872 | Dementia – Cognitive Assessment | Percentage of patients, regardless of age, with | PCPI | N/A |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| | | a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period. | | |
| 2091* | Persistent Indicators of Dementia without a Diagnosis – Long Stay | Percentage of nursing home residents age 65+ with persistent indicators of dementia and no diagnosis of dementia. | American Medical Directors Association | N/A |
| 2092* | Persistent Indicators of Dementia without a Diagnosis – Short Stay | Number of adult patients 65 and older who are included in the denominator (i.e., have persistent signs and symptoms of dementia) and who do not have a diagnosis of dementia on any MDS assessment. | American Medical Doctors Association | N/A |
| | | *Headache* | | |
| 2870 | Overuse of Opioid Containing Medications for Primary Headache Disorders | Percentage of patients aged 12 years and older diagnosed with primary headache disorder, and taking an opioid containing medication who were assessed for opioid containing medication overuse within the 12-month measurement period, and treated or referred for treatment if identified as overusing opioid containing medication. | American Academy of Neurology | N/A |
| | | *Epilepsy* | | |

| NQF # | Title | Description | Steward | Related or Competing |
|---|---|---|---|---|
| 1814 | Counseling for Women of Childbearing Potential with Epilepsy | All female patients of childbearing potential (12–44 years old) diagnosed with epilepsy who were counseled about epilepsy and how its treatment may affect contraception and pregnancy at least once a year | American Academy of Neurology | N/A |

## Appendix C: Neurology Portfolio—Use in Federal Programs

| NQF # | Title | Federal Programs: Finalized as of 2014-2015 |
|---|---|---|
| 0434 | STK-01: Venous Thromboembolism (VTE) Prophylaxis | Hospital Compare; CMS Hospital Inpatient Quality Reporting |
| 0435 | STK 02: Discharged on Antithrombotic Therapy | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals |
| 0436 | STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals |
| 0437 | STK 04: Thrombolytic Therapy | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals; Physician Feedback; CMS Physician Quality Reporting System; Value-Based Payment Modifier Program |
| 0438 | STK 05: Antithrombotic Therapy By End of Hospital Day Two | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals |
| 0439 | STK-06: Discharged on Statin Medication | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals |
| 0441 | STK-10: Assessed for Rehabilitation | Hospital Compare; CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) – Hospitals, Critical Access Hospitals |
| 0467 | Acute Stroke mortality Rate (IQI 7) | N/A |
| 0507 | Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports | Physician Feedback; CMS Physician Quality Reporting System; Value-Based Payment Modifier Program |
| 0661 | Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival. | Hospital Compare; CMS Hospital Outpatient Quality Reporting |
| 1814 | Counseling for Women of Childbearing Potential with Epilepsy | CMS Physician Quality Reporting System |
| 1952 | Time to Intravenous Thrombolytic Therapy | N/A |
| 2091 | Persistent Indicators of Dementia without a | N/A |

| NQF # | Title | Federal Programs: Finalized as of 2014-2015 |
|---|---|---|
| | Diagnosis – Long Stay | |
| 2092 | Persistent Indicators of Dementia without a Diagnosis – Short Stay | N/A |
| 2111 | Antipsychotic Use in Persons with Dementia | CMS Medicare Part D Drug Benefit |
| 2832 | STK-02: Discharged on Antithrombotic Therapy | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2833 | STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2834 | STK-04: Thrombotic Therapy | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2835 | STK-05: Antithrombotic Therapy By End of Hospital Day Two | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2836 | STK-06: Discharged on Statin Medication | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2837 | STK-10: Assessed for Rehabilitation | CMS Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) |
| 2863 | CSTK-06: Nimodipine Treatment Administered | N/A |
| 2864 | CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | N/A |
| 2865 | CSTK-02: Modified Rankin Score (mRS) at 90 Days | N/A |
| 2866 | CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | N/A |
| 2870 | Overuse of Opioid Containing Medications for Primary Headache Disorders | N/A |
| 2872 | Dementia – Cognitive Assessment | Meaningful Use Stage 2 (EHR Incentive Program); CMS Physician Quality Reporting System |

| NQF # | Title | Federal Programs: Finalized as of 2014-2015 |
|---|---|---|
| 2876 | Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | N/A |
| 2877 | Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity | N/A |

## Appendix D: Project Standing Committee and NQF Staff

STANDING COMMITTEE

**David Knowlton, MA (Co-Chair)**
Retired
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**David Tirschwell, MD, MSc (Co-Chair)**
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**Wunmi Isijola, MPH**
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**Christy Skipper, MS**
Project Manager

**Yetunde Alexandra Ogungbemi**
Project Analyst

## Appendix E: Measure Specifications

| | 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission. |
| Numerator Details | Four data elements are used to calculate the numerator:<br>• Reason for No VTE Prophylaxis – Hospital Admission - Documentation of a reason why no mechanical or pharmacological prophylaxis was administered at hospital admission.<br>Allowable values: Yes or No/UTD.<br>• Reason for Oral Factor Xa Inhibitor – Documentation of a reason why Oral Factor Xa Inhibitor was administered for VTE prophylaxis.<br>Allowable values: Yes or No/UTD.<br>• VTE Prophylaxis – The type of venous thromboembolism prophylaxis documented in the medical record.<br>Allowable values: 1 Low dose unfractionated heparin (LDUH); 2 Low molecular weight heparin (LMWH); 3 Intermittent pneumatic compression devices (IPC); 4 Graduated compression stockings (GCS); 5 Factor Xa Inhibitor; 6 Warfarin; 7 Venous foot pumps (VFP); 8 Oral Factor Xa Inhibitor; 9 Aspirin; A None of the above or not documented or unable to determine from medical record documentation.<br>• VTE Prophylaxis Date – The month, day, and year that the initial VTE prophylaxis (mechanical and/or pharmacological) was administered after hospital admission.<br>Patients are eligible for the numerator population when VTE Prophylaxis equals 1,2,3,5,6,7, or allowable value equals "yes" for Reason for No VTE Prophylaxis-Hospital Admission or "yes" for Reason for Oral Factor Xa Inhibitor and VTE Prophylaxis Date = 0 or 1. |
| Denominator Statement | Ischemic or hemorrhagic stroke patients |
| Denominator | Seven data elements are used to calculate the denominator: |

| | 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
|---|---|
| Details | 1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>7. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay < 2 days<br>• Length of Stay > 120 days<br>• Comfort measures only documented on day of or day after hospital arrival<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days or greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure are excluded. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. |

| | 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
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| | b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br>3. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>4. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Length of Stay calculation.<br>5. Calculate the Length of Stay (LOS). Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay (LOS)<br>a. If the Length of Stay is greater than or equal to zero and less than 2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the Length of Stay is greater than or equal to 2, continue processing and proceed to VTE Prophylaxis.<br>7. Check VTE Prophylaxis<br>a. If VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If VTE Prophylaxis equals A only, continue processing and proceed to Reason for No VTE Prophylaxis-Hospital Admission.<br>c. If VTE Prophylaxis equals 1, 2, 3, 4, 5, 6, 7, 8 or 9, continue processing and proceed to step 9 and recheck VTE Prophylaxis.<br>8. Check Reason for No VTE Prophylaxis-Hospital Admission<br>a. If Reason for No VTE Prophylaxis-Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for No VTE Prophylaxis-Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Reason for No VTE Prophylaxis-Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>9. Recheck VTE Prophylaxis<br>a. If none of the VTE Prophylaxis equals 1, 2, 3, 5, 6 or 7, continue processing and recheck VTE Prophylaxis.<br>b. If any VTE Prophylaxis equals 1, 2, 3, 5, 6 or 7, continue processing and proceed to step 13 and check VTE Prophylaxis Date.<br>10. Recheck VTE Prophylaxis<br>a. If VTE Prophylaxis is not equal to 8, continue processing and proceed to Reasons for No VTE Prophylaxis-Hospital Admission.<br>b. If any of VTE Prophylaxis equals 8, continue processing and proceed to step 12 and check |

| | 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
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| | Reason for Oral Factor Xa Inhibitor.<br>11. Check Reason for No VTE Prophylaxis-Hospital Admission<br>a. If Reason for No VTE Prophylaxis-Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for No VTE Prophylaxis-Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Reason for No VTE Prophylaxis-Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>12. Check Reason for Oral Factor Xa Inhibitor<br>a. If Reason for Oral Factor Xa Inhibitor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Oral Factor Xa Inhibitor equals Yes, continue processing and proceed to VTE Prophylaxis Date.<br>c. If Reason for Oral Factor Xa Inhibitor equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>13. Check VTE Prophylaxis Date<br>a. If VTE Prophylaxis Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If VTE Prophylaxis Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the VTE Prophylaxis Date equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to VTE Prophylaxis Day calculation.<br>14. Calculate VTE Prophylaxis Day. The VTE Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus the Admission Date.<br>15. Check VTE Prophylaxis Day<br>a. If the VTE Prophylaxis Day is equal to zero or 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>b. If the VTE Prophylaxis Day is greater than or equal to 2, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the VTE Prophylaxis Day is less than 0, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0372 : Intensive Care Unit Venous Thromboembolism Prophylaxis<br>0371 : Venous Thromboembolism Prophylaxis<br>0239 : Perioperative Care: Venous Thromboembolism (VTE) Prophylaxis<br>0218 : Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures NQF# 0371 and NQF# 0372 are Venous Thromboembolism (VTE) measures which specifically exclude the stroke population. The measures are completely harmonized in terms of measure specifications and data element definitions; NQF# 0218 addresses the surgical population only, and therefore do not apply to stroke patients. Common data elements with this measure have been completely harmonized. Measure 0239 is a physician performance measure with a targeted population of surgical patients identified through CPT codes and thus is a different |

| | 0434 STK-01: Venous Thromboembolism (VTE) Prophylaxis |
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| | level of measurement. This measure evaluates physician practice as opposed to hospital processes.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0435 STK 02: Discharged on Antithrombotic Therapy |
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| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy,STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635876076083056831.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge |
| Numerator Details | One data element is used to calculate the numerator:<br>• Antithrombotic Therapy Prescribed at Discharge – Documentation that antithrombotic therapy was prescribed at hospital discharge. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. |
| Denominator Statement | Ischemic stroke patients |
| Denominator Details | Nine data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid |

| | 0435 STK 02: Discharged on Antithrombotic Therapy |
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| | endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. Reason For Not Prescribing Antithrombotic Therapy at Discharge – Documentation of a reason for not prescribing antithrombotic therapy at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care<br>• Documented reason for not prescribing antithrombotic therapy at discharge |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Antithrombotic Therapy at Discharge. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a |

| | 0435 STK 02: Discharged on Antithrombotic Therapy |
|---|---|
| | Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8 continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Antithrombotic Therapy Prescribed at Discharge.<br>7. Check Antithrombotic Therapy Prescribed at Discharge<br>a. If Antithrombotic Therapy Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Antithrombotic Therapy Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Antithrombotic Therapy Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Antithrombotic Therapy at Discharge.<br>8. Check Reason for Not Prescribing Antithrombotic Therapy at Discharge<br>a. If Reason for Not Prescribing Antithrombotic Therapy at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Antithrombotic Therapy at Discharge equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Prescribing Antithrombotic Therapy at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0325 : Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy<br>0438 : STK 05: Antithrombotic Therapy By End of Hospital Day Two |

| | 0435 STK 02: Discharged on Antithrombotic Therapy |
|---|---|
| | 0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0438 Antithrombotic Therapy By End of Hospital Day 2 is the fifth (STK-5) measure in The Joint Commission stroke core measure set and also targets the ischemic stroke population; however, the timeframe for antithrombotic administration is different in this measure than STK-2. STK-5 focuses on the early management of stroke care and antithrombotic therapy administered within the first 48 hours of acute ischemic stroke onset rather than discharge. All common data elements for these measures are completely harmonized. Measure 0068 is a physician performance measure and could extend to the outpatient setting. Measure 0068 encompasses a different target population, specifically patients with ischemic vascular disease who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI). As previously noted, this measure evaluate physician practice as opposed to hospital processes.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635882183961489008.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge |
| Numerator Details | One data element is used to calculate the numerator:<br>• Anticoagulation Therapy Prescribed at Discharge – Documentation that anticoagulation therapy was prescribed at hospital discharge. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. |
| Denominator Statement | Ischemic stroke patients with documented atrial fibrillation/flutter. |
| Denominator Details | Ten data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Atrial Fibrillation/Flutter – Documentation that the patient has a history of any atrial fibrillation (e.g., remote, persistent, or paroxysmal) or atrial flutter in the past OR current atrial fibrillation or flutter on EKG.<br>Allowable values: Yes or No/UTD.<br>3. Birthdate - The month, day and year the patient was born.<br>4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>5. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>6. Discharge Date – The month, day and year the patient was discharged from acute care, left against medical advice or expired during the stay. |

| | 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
|---|---|
| | 7. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>8. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>9. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>10. Reason For Not Prescribing Anticoagulation Therapy at Discharge – Documentation of a reason for not prescribing anticoagulation therapy at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1, and patients with documented Atrial Fibrillation/Flutter. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care<br>• Documented reason for not prescribing anticoagulation therapy at discharge |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with the following ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Anticoagulation Therapy. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score |

| | 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
|---|---|
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Atrial Fibrillation/Flutter.<br>7. Check Atrial Fibrillation/Flutter.<br>a. If Atrial Fibrillation/Flutter is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Atrial Fibrillation/Flutter equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Atrial Fibrillation/Flutter equals Yes, continue processing and check Anticoagulation Therapy Prescribed at Discharge.<br>8. Check Anticoagulation Therapy Prescribed at Discharge.<br>a. If Anticoagulation Therapy Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Anticoagulation Therapy Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Anticoagulation Therapy Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Anticoagulation Therapy at Discharge. |

| | 0436 STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter |
|---|---|
| | 9. Check Reason for Not Prescribing Anticoagulation Therapy at Discharge.<br>a. If Reason for Not Prescribing Anticoagulation Therapy at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Anticoagulation Therapy at Discharge equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Reason for Not Prescribing Anticoagulation Therapy at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0084 : Heart Failure (HF) : Warfarin Therapy Patients with Atrial Fibrillation<br>0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge<br>0624 : Atrial Fibrillation - Anticoagulation Therapy<br>1525 : Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 1525 from the American College of Cardiology is a physician performance measure identified through CPT codes and could extend to the outpatient setting. The measure evaluates physician practice as opposed to hospital processes. The target population for measure 1525 differs from measure 0436 Anticoagulation Therapy for Atrial Fibrillation/Flutter in that it includes in the denominator population all patients age 18 years and older with a diagnosis of nonvalvular atrial fibrillation or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification. It is not specified for ischemic stroke patients with atrial fibrillation/flutter only.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0437 STK 04: Thrombolytic Therapy |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635876964272987900.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well. |
| Numerator Details | Five data elements are used to calculate the numerator:<br>• Date Last Known Well – The month, date, and year prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>• Time Last Known Well – The time (military time) prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>• IV Thrombolytic Initiation – Documentation that intravenous (IV) thrombolytic therapy (t-PA) was initiated at this hospital. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>• IV Thrombolytic Initiation Date – The month, date, and year the IV thrombolytic therapy was initiated to a patient with ischemic stroke at this hospital.<br>• IV Thrombolytic Initiation Time - The time (military time) for which IV thrombolytic therapy was initiated to a patient with ischemic stroke at this hospital.<br>Patients are eligible for the numerator population when the IV Thrombolytic Initiation Date and IV Thrombolytic Initiation Time minus Date Last Known Well and Time Last Known Well >/= 0 minutes and </= 180 minutes. |
| Denominator Statement | Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well. |
| Denominator Details | Fourteen data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Arrival Date – The earliest documented month, day, and year, the patient arrived at the hospital.<br>3. Arrival Time - The earliest documented time (military time) the patient arrived at the |

| | 0437 STK 04: Thrombolytic Therapy |
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| | hospital.<br>4. Birthdate - The month, day and year the patient was born.<br>5. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>6. Date Last Known Well – The month, date, and year prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>7. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>8. ED Patient – Documentation that the patient received care in a dedicated emergency department of the facility.<br>Allowable values: Yes or No/UTD.<br>9. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>11. Last Known Well – Documentation of the date and time prior to hospital arrival at which it was witnessed or reported that the patient was last known to be without the signs or symptoms of the current stroke or at his or her baseline state of health.<br>Allowable values: Yes or No/UTD.<br>12. Reason for Extending the Initiation of IV Thrombolytic – Physician/APN/PA or pharmacist documentation of a reason for extending the initiation of IV thrombolytic.<br>Allowable values: Yes or No/UTD.<br>13. Reason For Not Initiating IV Thrombolytic – Physician/APN/PA or pharmacist documentation of a reason for not initiating IV thrombolytic.<br>Allowable values: Yes or No/UTD.<br>14. Time Last Known Well – The time (military time) prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Time last known well to arrival in the emergency department greater than 2 hours<br>• Documented reason for extending the initiation of IV thrombolytic<br>• Documented reason for not initiating IV thrombolytic |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded. |

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| | • Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients with time last known well to arrival in the emergency department greater than 2 hours are excluded.<br>• Patients are excluded if “Yes” is selected for Reason for Extending the Initiation of IV Thrombolytic.<br>• Patients are excluded if "Yes" is selected for Reason For Not Initiating IV Thrombolytic. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to ED Patient.<br>3. Check ED Patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ED Patient equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If ED Patient equals Yes, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>5. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Arrival Date.<br>6. Check Arrival Date<br>a. If the Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Date equals a Non-Unable To Determine (non-UTD) Value, continue processing |

| | 0437 STK 04: Thrombolytic Therapy |
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| | and proceed to Arrival Time.<br>7. Check Arrival Time only if the Arrival Date is a Non Unable to Determine (non-UTD) Value<br>a. If the Arrival Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Time equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Last Known Well.<br>8. Check Last Known Well<br>a. If Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Last Known Well equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Last Known Well equals Yes, continue processing and proceed to Date Last Known Well.<br>9. Check Date Last Known Well<br>a. If the Date Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Date Last Known Well equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Date Last Known Well equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Time Last Known Well.<br>10. Check Time Last Known Well only if the Date Last Known Well is a Non Unable to Determine (non-UTD) Value<br>a. If the Time Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Time Last Known Well equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Time Last Known Well equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to the Timing I calculation.<br>11. Calculate Timing I only if the Time Last Known Well is a Non Unable to Determine (non-UTD) Value. Timing I, in minutes, is equal to the Arrival Date and the Arrival Time minus the Date Last Known Well and the Time Last Known Well. Calculate Timing I for each case that has a Non Unable to Determine (non-UTD) date and time combination.<br>a. If the time in minutes is greater than 120, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 120, continue processing and proceed to IV Thrombolytic Initiation.<br>12. Check IV Thrombolytic Initiation<br>a. If IV Thrombolytic Initiation is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If IV Thrombolytic Initiation equals No, continue processing and proceed to Reason for Not Initiating IV Thrombolytic.<br>c. If IV Thrombolytic Initiation equals Yes, continue processing and check IV Thrombolytic Initiation Date.<br>13. Check Reason for Not Initiating IV Thrombolytic<br>a. If Reason for Not Initiating IV Thrombolytic is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. |

| | 0437 STK 04: Thrombolytic Therapy |
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| | b. If Reason for Not Initiating IV Thrombolytic equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Reason for Not Initiating IV Thrombolytic equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>14. Check IV Thrombolytic Initiation Date<br>a. If the IV Thrombolytic Initiation Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the IV Thrombolytic Initiation Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the IV Thrombolytic Initiation Date equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to IV Thrombolytic Initiation Time.<br>15. Check IV Thrombolytic Initiation Time only if the IV Thrombolytic Initiation Date is a Non Unable to Determine (non-UTD) Value<br>a. If the IV Thrombolytic Initiation Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the IV Thrombolytic Initiation Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the IV Thrombolytic Initiation Time equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to the Timing II calculation.<br>16. Calculate Timing II. Timing II, in minutes, is equal to the IV Thrombolytic Initiation Date and the IV Thrombolytic Initiation Time minus the Date Last Known Well and the Time Last Known Well. a. If the time in minutes is greater than 270, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 270, continue processing and proceed to recheck Timing II.<br>c. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>17. Recheck Timing II a. If the time in minutes is greater than or equal to zero and less than or equal to 180, the case will proceed to a Measure category Assignment of E and will be in the Numerator Population. Stop processing.<br>b. If the time in minutes is greater than 180 and less than or equal to 270, continue processing and proceed to Reason for Extending the Initiation of IV Thrombolytic.<br>18. Check Reason for Extending the Initiation of IV Thrombolytic a. If Reason for Extending the Initiation of IV Thrombolytic is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Extending the Initiation of IV Thrombolytic equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Extending the Initiation of IV Thrombolytic equals No, the case will proceed to a Measure Category Assignment D and will be in the Measure Population. Stop processing.<br>Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0288 : Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival<br>0242 : Stroke and Stroke Rehabilitation: Tissue Plasminogen Activator (t-PA) Considered<br>0164 : Fibrinolytic Therapy received within 30 minutes of hospital arrival<br>1952 : Time to Intravenous Thrombolytic Therapy |

| | 0437 STK 04: Thrombolytic Therapy |
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| | 5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0288 and 0164 are AMI (Acute Myocardial Infarction) measures. They are part of the Centers for Medicare & Medicaid Services/The Joint Commission aligned measures relating to the administration of fibrinolytic therapy for hospital inpatients and are harmonized with 0437 to the extent that the measures utilize some of the same data elements. The target population for 0288 and 0164 is inpatients with an ICD-10-CM Principal Diagnosis Code for acute myocardial infarction. The target population for 0437 differs in that it includes patients hospitalized for acute ischemic stroke. In addition, the evidence around the timeframe for administration of therapy is different for the AMI and ischemic stroke populations, and 0288 and 0164 include administration of lytic drugs other than activase/alteplase/IV t-PA/recombinant tissue plasminogen activator (rt-PA). Measure 0164 will be removed from the CMS/The Joint Commission aligned measures starting with 01/01/2016 discharges. The target population for measure 1952 from the American Heart Association/American Stroke Association also includes patients hospitalized for acute ischemic stroke; however, the measure captures average door-to-needle time and uses a target of less than 60 minutes rather than the proportion of patients who arrive within 2 hours and receive t-PA within 3 hours of time last known well. Measure 0242 is a physician performance measure with a targeted population of ischemic stroke patients identified through CPT codes and could extend to the outpatient setting. This measure evaluates physician practice as opposed to hospital processes. It is no longer NQF-endorsed<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1).<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-6: Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635878644173852080.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients who had antithrombotic therapy administered by<br>end of hospital day two. |
| Numerator Details | One data element is used to calculate the numerator:<br>• Antithrombotic Therapy Administered by End of hospital Day 2 – Documentation that antithrombotic therapy is administered by the end of hospital day 2. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. |
| Denominator Statement | Ischemic stroke patients |
| Denominator Details | Ten data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Arrival Date – The earliest documented month, day, and year the patient arrived at the hospital.<br>3. Birthdate - The month, day and year the patient was born.<br>4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>5. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid |

| | 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. IV OR IA Thrombolytic (t-PA) Therapy Administered at this Hospital or within 24 Hours Prior to Arrival – Documentation demonstrates that the patient received intravenous (IV) or intra-arterial (IA) thrombolytic therapy (t-PA) at this hospital or within 24 hours prior to arrival.<br>Allowable values: Yes or No/UTD.<br>10. Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 – Physician/APN/PA or pharmacist documentation of a reason for not administering antithrombotic therapy by end of hospital day 2.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1 |
| Exclusions | • Less than 18 years of age<br>• Duration of Stay < 2 days<br>• Length of Stay > 120 days<br>• Comfort measures only documented on the day of or day after hospital arrival<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• IV OR IA thrombolytic therapy administered at this hospital or within 24 hours prior to arrival<br>• Documented reason for not administering antithrombotic therapy by end of hospital day 2 |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Duration of Stay (in days) is equal to the Discharge Date minus the Arrival Date. If the Duration of Stay is less than 2 days, the patient is excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day<br>0 or 1) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients are excluded if "Yes" is selected for IV (intravenous) or IA (intra-arterial)Thrombolytic Therapy (t-PA)Administered at This Hospital or Within 24 Hours Prior to Arrival.<br>• Patients are excluded if "Yes" is selected for Reason For Not Administering Antithrombotic Therapy By End of Hospital Day 2. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score |

| | 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Comfort Measures Only.<br>3. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>5. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Arrival Date.<br>6. Check Arrival Date<br>a. If the Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Date equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Duration of Stay calculation.<br>7. Calculate the Duration of Stay. The Duration of Stay, in days, is equal to the Discharge Date minus the Arrival Date.<br>8. Check Duration of Stay<br>a. If the Duration of Stay is greater than or equal to zero and less than 2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the Duration of Stay is greater than or equal to 2, continue processing and proceed to IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival.<br>9. Check IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival<br>a. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival is missing, the case will proceed to a Measure Category Assignment of X and |

| | 0438 STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | will be rejected. Stop processing.<br>b. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival equals No, continue processing and proceed to Antithrombotic Therapy Administered By End of Hospital Day 2.<br>10. Check Antithrombotic Therapy Administered By End of Hospital Day 2<br>a. If Antithrombotic Therapy Administered By End of Hospital Day 2 is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Antithrombotic Therapy Administered By End of Hospital Day 2 equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Antithrombotic Therapy Administered By End of Hospital Day 2 equals No, continue processing and check Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2.<br>11. Check Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2<br>a. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0325 : Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy<br>0435 : STK 02: Discharged on Antithrombotic Therapy<br>0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0435 Discharged on Antithrombotic Therapy is the second (STK-2) measure in The Joint Commission stroke core measure set and also targets the ischemic stroke population; however, the timeframe for antithrombotic administration is different in this measure than STK-5. STK-2 focuses on hospital discharge and the prescription of antithrombotic medications at that time. All common data elements are completely aligned between the two measures. Measure 0068 is a physician performance measure and thus a different level of measurement. Measure 0068 encompasses a different target population, specifically patients with ischemic vascular disease who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI). Both of these measures evaluate physician practice as opposed to hospital processes<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0439 STK-06: Discharged on Statin Medication |
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| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635878758534627046.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients prescribed statin medication at hospital discharge |
| Numerator Details | One data element is used to calculate the numerator:<br>• Statin Medication Prescribed at Discharge – Documentation that a statin medication was prescribed at hospital discharge. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. |
| Denominator Statement | Ischemic stroke patients |
| Denominator Details | Nine data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid |

| | 0439 STK-06: Discharged on Statin Medication |
|---|---|
| | endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. Reason For Not Prescribing Statin Medication at Discharge – Documentation of a reason for not prescribing a statin medication at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care<br>• Documented reason for not prescribing statin medication at discharge |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3,, if medical record documentation states that the patient was admitted for the elective performance of this procedure are excluded.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Statin Medication at Discharge. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable. |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a |

| | 0439 STK-06: Discharged on Statin Medication |
|---|---|
| | Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7 the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Pre-Arrival Lipid-Lowering Agent.<br>7. Check Statin Medication Prescribed at Discharge<br>a. If Statin Medication Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Statin Medication Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Statin Medication Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Statin Medication at Discharge.<br>8. Check Reason for Not Prescribing Statin Medication at Discharge<br>a. If Reason for Not Prescribing Statin Medication at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Statin Medication at Discharge equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Prescribing Statin Medication at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0639 : Statin Prescribed at Discharge<br>0074 : Chronic Stable Coronary Artery Disease: Lipid Control<br>0547 : Diabetes and Medication Possession Ratio for Statin Therapy |

| | 0439 STK-06: Discharged on Statin Medication |
|---|---|
| | 0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0545 : Adherence to Statins for Individuals with Diabetes Mellitus<br>0118 : Anti-Lipid Treatment Discharge<br>1519 : Statin Therapy at Discharge after Lower Extremity Bypass (LEB)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Three statin therapy measures were identified from the NQF database. All three measures address target diagnoses other than ischemic stroke or specific surgical procedures for patients 18 years or older: 0074 Coronary Artery Disease; 0118 isolated Coronary Artery Bypass Graft (CABG); and, 1519 Lower Extremity Bypass (LEB). Measure 1519 addresses inpatient organizational performance.. The other two measures, 0074 and 0118 are provider-level measures in the ambulatory care setting.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 0441 STK-10: Assessed for Rehabilitation |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services during the hospital stay.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, and STK-8: Stroke Education) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635883794720981362.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services. |
| Numerator Details | One data element is used to calculate the numerator:<br>• Assessed for Rehabilitation Services – Documentation that the patient was assessed for or received rehabilitation services during this hospitalization. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. |
| Denominator Statement | Ischemic or hemorrhagic stroke patients. |
| Denominator Details | Eight data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid |

| | 0441 STK-10: Assessed for Rehabilitation |
|---|---|
| | endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>Population: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2. |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care |
| Exclusion details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to Comfort Measures Only.<br>3. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. |

| | 0441 STK-10: Assessed for Rehabilitation |
|---|---|
| | b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>5. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Assessed for Rehabilitation Services.<br>6. Check Assessed for Rehabilitation Services<br>a. If Assessed for Rehabilitation Services is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Assessed for Rehabilitation Services equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If Assessed for Rehabilitation Services equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0244 : Stroke and Stroke Rehabilitation: Rehabilitation Services Ordered<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: NQF#0244 focuses on rehabilitation orders written prior to hospital discharge and not tbe rehabilitation assessment or services received by the patient.<br><br>5b.1 If competing, why superior or rationale for additive value: Although both NQF#0441 STK10: Assessed for Rehabilitation and NQF#0244 target ischemic or hemorrhagic stroke patients in the acute inpatient setting, NQF#0441 is superior for two reasons. First, the numerator statement for NQF#0441 is a broader measure of |

| | 0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports |
|---|---|
| Status | Submitted |
| Steward | American College of Radiology (ACR) |
| Description | Percentage of final reports for carotid imaging studies (neck magnetic resonance angiography (MRA), neck computerized tomographic angiography (CTA), neck duplex ultrasound, carotid angiogram) performed that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement |
| Type | Process |
| Data Source | Administrative claims, Electronic Clinical Data : Registry Not applicable<br>No data collection instrument provided Attachment Diagnostic_Imaging_Specifications-635884471388767886.docx |
| Level | Clinician : Individual |
| Setting | Hospital/Acute Care Facility, Imaging Facility |
| Numerator Statement | Final reports for carotid imaging studies that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement |
| Numerator Details | Numerator Definition:<br>Direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement - includes direct angiographic stenosis calculation based on the distal lumen as the denominator for stenosis measurement OR an equivalent validated method referenced to the above method (eg, for duplex ultrasound studies, velocity parameters that correlate with anatomic measurements that use the distal internal carotid lumen as the denominator for stenosis measurement)<br>Numerator Instructions:<br>This measure requires that the estimate of stenosis included in the report of the imaging study employ a method such as the North American Symptomatic Carotid Endarterectomy Trial (NASCET) method for calculating the degree of stenosis. The NASCET method calculates the degree of stenosis with reference to the lumen of the carotid artery distal to the stenosis. For duplex imaging studies the reference is indirect, since the degree of stenosis is inferred from velocity parameters and cross referenced to published or self-generated correlations among velocity parameters and results of angiography or other imaging studies which serve as the gold standard. In Doppler ultrasound, the degree of stenosis can be estimated using Doppler parameter of the peak systolic velocity (PSV) of the internal carotid artery (ICA), with concordance of the degree of narrowing of the ICA lumen. Additional Doppler parameters of ICA-to-common carotid artery (CCA) PSV ratio and ICA end-diastolic velocity (EDV) can be used when degree of stenosis is uncertain from ICA PSV. (Grant et al,<br>Society of Radiologists in Ultrasound, 2003)6.<br><br>A short note can be made in the final report, such as:<br>• “Severe left ICA stenosis of 70-80% by NASCET criteria” or<br>• “Severe left ICA stenosis of 70-80% by criteria similar to NASCET” or<br>• “70% stenosis derived by comparing the narrowest segment with the distal luminal diameter as related to the reported measure of arterial narrowing” or<br>• “Severe stenosis of 70-80% - validated velocity measurements with angiographic measurements, velocity criteria are extrapolated from diameter data as defined by the Society of Radiologists in Ultrasound Consensus Conference Radiology 2003; 229;340-346.”<br>Documentation-Information populating the final report may reside in a dedicated field in the electronic health record (EHR) or picture archiving and communication system (PACS), |

| | 0507 Diagnostic Imaging: Stenosis Measurement in Carotid Imaging Reports |
|---|---|
| | however stenosis measurement information should be included in the final report in order to be readily accessible in all circumstances<br>FOR EHR SPECIFICATION:<br>No Current HQMF eCQM Available. We are in the process of developing full electronic measure specifications.<br>FOR ADMINISTRATIVE CLAIMS SPECIFICATIONS:<br>Report CPT II Code 3100F: Carotid imaging study report (includes direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement) |
| Denominator Statement | All final reports for carotid imaging studies (neck MRA, neck CTA, neck duplex ultrasound, carotid angiogram) performed |
| Denominator Details | FOR EHR SPECIFICATION:<br>No Current HQMF eCQM Available. We are in the process of developing full electronic measure specifications.<br>FOR ADMINISTRATIVE CLAIMS SPECIFICATIONS:<br>Patient encounter during the reporting period (CPT): 36222, 70498, 70547, 70548, 70549, 93880, 93882 |
| Exclusions | No Denominator Exclusions or Denominator Exceptions |
| Exclusion details | None |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable<br>Provided in response box S.15a |
| Stratification | We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected. |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | To calculate performance rates:<br>1) Find the patients who meet the initial patient population (ie, the general group of patients that the performance measure is designed to address).<br>2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.<br>3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator<br>If the patient does not meet the numerator, this case represents a quality failure. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized? Yes<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: |

| | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival |
|---|---|
| Status | Submitted |
| Steward | Centers for Medicare & Medicaid Services |
| Description | This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the emergency department (ED) within two hours of the onset of symptoms and have a head computed tomography (CT) or magnetic resonance imaging (MRI) scan interpreted within 45 minutes of ED arrival. The measure is calculated using chart-abstracted data, on a rolling, quarterly basis and is publicly reported, in aggregate, for one calendar year. The measure has been publicly reported, annually, by CMS as a component of its Hospital Outpatient Quality Reporting (HOQR) Program since 2012. |
| Type | Process |
| Data Source | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records An electronic data collection tool is made available from vendors or facilities can download the free CMS Abstraction & Reporting Tool (CART). Paper tools for manual abstraction, which are posted on www.QualityNet.org, are also available for the CART tool. These tools are posted on www.QualityNet.org.<br>Available at measure-specific web page URL identified in S.1 Attachment NQF_0661_Measure_Code_Set.xlsx |
| Level | Facility, Population : National |
| Setting | Emergency Medical Services/Ambulance, Hospital/Acute Care Facility |
| Numerator Statement | The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan interpreted within 45 minutes of ED arrival. |
| Numerator Details | The numerator is defined by six evaluation and management (E/M) codes and 102 ICD-10-CM diagnosis codes included in the code set for this measure; these detailed lists can be found in the Excel workbook provided for Section S2b.<br>The numerator includes patients age 18 or older who were last known well within two hours of ED arrival and had a head CT or MRI ordered and interpreted within 45 minutes of ED arrival. Numerator exceptions include:<br>• Date Last Known Well is equal to UTD<br>• Time Last Known Well is equal to UTD<br>• Arrival Time is equal to UTD<br>• Head CT Scan or MRI Interpretation Date is equal to UTD<br>• Head CT Scan or MRI Interpretation Date is equal to UTD |
| Denominator Statement | The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan ordered. |
| Denominator Details | The denominator is defined by six evaluation and management (E/M) codes and 104 ICD-10-CM diagnosis codes included in the code set for this measure; these detailed lists can be found in the Excel workbook provided for Section S2b.<br>The denominator includes patients age 18 or older who were last known well within two hours of ED arrival and had a head CT or MRI ordered. |
| Exclusions | Studies are excluded for any patients under 18 years of age, patients who expired in the ED, or patients who left the ED against medical advice or discontinued care. Additionally, patients who do not arrive to the ED within two hours of symptom onset or who do not have a head CT or MRI scan ordered are excluded from the target population. |

| | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival |
|---|---|
| Exclusion details | Studies are excluded for any patients that meet any of the following criteria:<br>• Patients less than 18 years of age<br>• Patients who expired (discharge code = 6)<br>• Patients who left the emergency department against medical advice or discontinued care (discharge code = 7 or 8)<br>• Patients who have a head CT or MRI scan order equal to "No"<br>• Patients who have a Last Known Well field equal to "No" |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable; this measure does not risk adjust.<br>Provided in response box S.15a |
| Stratification | Not applicable; this measure does not stratify its results. |
| Type Score | Other (specify): Percentage better quality = higher score |
| Algorithm | This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI interpreted within 45 minutes of ED arrival. The measure is calculated based on four consecutive quarters of hospital outpatient claims data, as follows:<br>1. Check E/M Code; if on Table 1.0 (in the Excel workbook provided for Section S2b), proceed<br>2. Calculate Patient Age (Outpatient Encounter Date - Birthdate)<br>3. Check Patient Age; if >= 18, proceed<br>4. Check ICD-10-CM Principal Diagnosis Code; if on Table 8.0 (in the Excel workbook provided for Section S2b), proceed<br>5. Check Discharge Code; exclude any patients with code 6, 7, or 8<br>6. Check Head CT or MRI Scan Order; if "Yes," proceed<br>7. Check Last Known Well; if "Yes," proceed<br>8. Check Date Last Known Well; if a Non-Unable to Determine (UTD) value, proceed<br>9. Check Time Last Known Well; if a Non-UTD value, proceed<br>10. Check Arrival Time; if a Non-UTD value, proceed<br>11. Calculate measurement value (Arrival Time minus Time Last Known Well)<br>12. Check measurement value; if >= 0 min and <= 120 min, record as the denominator and proceed<br>13. Check Head CT or MRI Scan Interpretation Date; if a Non-Unable to Determine (UTD) value, proceed<br>14. Check Head CT or MRI Scan Interpretation Time; if a Non-Unable to Determine (UTD) value, proceed<br>15. Calculate measurement value (Arrival Time minus Head CT or MRI Scan Interpretation Time)<br>16. Check measurement value; if >= 0 min and <= 45 min, record as the numerator<br>17. Aggregate denominator and numerator counts by Medicare provider number<br>18. Measure = numerator counts / denominator counts [The value should be recorded as a percentage] No diagram provided |
| Copyright / Disclaimer | 5.1 Identified measures: 0437 : STK 04: Thrombolytic Therapy<br><br>5a.1 Are specs completely harmonized? No |

| | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival |
|---|---|
| | 5a.2 If not completely harmonized, identify difference, rationale, impact: Although NQF #0437 (used in the Hospital Inpatient Quality Reporting [HIQR] Program) is similar to NQF #0661 (HOQR), the two measures serve different target populations and purposes: the HOQR measure focuses on imaging in the ED setting, while the HIQR measure focuses on administration of thrombolytic therapy in an inpatient setting. Both measures do, however, share a number of key data elements (i.e., Last Known Well, Date Last Known Well, Time Last Known Well, and Arrival Time). The specifications for the two measures are generally aligned, where possible. As appropriate, the measure maintenance team for the HOQR measure (NQF #0661) incorporates specification updates added by the measure maintenance team for the HIQR measure (NQF #0437) to maintain harmonization (e.g., updates to the appropriate ICD-10 codes to determine measure inclusion). The measure-maintenance teams for both reporting programs meet periodically to resolve any inconsistencies in the interpretation or guidance provided for the shared data elements.<br><br>5b.1 If competing, why superior or rationale for additive value: We did not identify any competing measures that address both the same measure focus and target population as NQF #0661. |

| | 1814 Counseling for Women of Childbearing Potential with Epilepsy |
|---|---|
| Status | Submitted |
| Steward | American Academy of Neurology |
| Description | All female patients of childbearing potential (12–44 years old) diagnosed with epilepsy who were counseled or referred for counseling for how epilepsy and its treatment may affect contraception OR pregnancy at least once a year |
| Type | Process |
| Data Source | Electronic Clinical Data : Electronic Health Record, Paper Medical Records NeuroPI Program: for maintenance of certification Performance in Practice module.<br>CECity PQRSWizard<br>Axon Registry<br>Physician Quality Reporting System measurement set<br>No data collection instrument provided Attachment 2015-10-13_Epilepsy_Measure_6.xlsx |
| Level | Clinician : Group/Practice |
| Setting | Ambulatory Care : Clinician Office/Clinic |
| Numerator Statement | Female patients or caregivers counseled* at least once a year about how epilepsy and its treatment may affect contraception OR pregnancy.<br>*Counseling should include a discussion about folic acid supplementation, contraception, potential anti-seizure medi |
| Numerator Details | Measure is no longer applicable to claims reporting, and values (SNOMED) for gathering information through EHR and Registry sources is attached in S.2b. |
| Denominator Statement | All females of childbearing potential (12-44 years old) with a diagnosis of epilepsy. |
| Denominator Details | Measure is no longer applicable to claims reporting, and values (SNOMED) for gathering information through EHR and Registry sources is attached in S.2b.<br>Epilepsy ICD-9-CM diagnosis codes<br>345.00, 345.01, 345.10, 345.11, 345.40. 345.41, 345.50, 345.51, 345.60, 345.61, 345.70, 345.71, 345.90, 345.91<br>OR Epilepsy ICD-10-CM diagnosis codes<br>G40.A09, G40.A19, G40.309, G40.411, G40.209, G40.219, G40.109, G40.119, G40.822, G40.824, G40.909 |
| Exclusions | Excluded: patients diagnosed with menopause or surgically sterile.<br>Exceptions:<br>Patient has a diagnosis of neurodevelopmental disorder, encephalopathy, hydrocephalus, brain injury, or cerebral palsy.<br>Patient has a diagnosis of severe cognitive impairment or severe intellectual disability. |
| Exclusion details | Measure is no longer applicable to claims reporting, and values (SNOMED) for gathering information through EHR and Registry sources is attached in S.2b. |
| Risk Adjustment | No risk adjustment or risk stratification<br>N/A |
| Stratification | Not Applicable |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | See Full AAN Women with Epilepsy of Childbearing Potential Measure Testing Report. MNCM completed validation of the data in a three-step process: 1) denominator certification, 2) data file quality checks, and 3) validation audit. Details of this validation are described in this report. No diagram provided |

| | 1814 Counseling for Women of Childbearing Potential with Epilepsy |
|---|---|
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

| | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|
| Status | Submitted |
| Steward | American Heart Association/American Stroke Association |
| Description | Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. |
| Type | Process |
| Data Source | Electronic Clinical Data : Registry Get with the Guidelines Stroke Data Collection Form. This is a paper version of the electronic data collection tool which is called the Patient Management Tool (PMT).<br>Available in attached appendix at A.1 Attachment Time_to_Thrombolytic_Data_Dictionary.xlsx |
| Level | Facility |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle t |
| Numerator Details | All denominator patients with the following:<br>['Date/time IV thrombolytic therapy initiated' minus 'Arrival Date/Time'] <= 60 minutes<br><br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |
| Denominator Statement | All acute ischemic stroke patients who received intravenous thrombolytic therapy during the hospital stay. |
| Denominator Details | An ICD-9-CM/ICD-10 Principal Diagnosis Code for acute ischemic stroke:<br>Diagnosis for ischemic stroke ICD-9: 433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.11, 434.91, 436<br>Diagnosis for ischemic stroke ICD-10: ICD-10: I63.00, I63.011, I63.012, 163.019, I63.02, I63.031, I63.032, I63.039, I63.09, I63.10, I63.111, I63.112, I63.119, I63.12, I63.131, I63.132, I63.139, I63.19, I63.20, I63.211, I63.212, I63.219, I63.22, I63.231, I63.232, I63.239, I63.29, I63.30, I63.311, I63.312, I63.319, I63.321, I63.322, I63.329, I63.331, I63.332, I63.339, I63.341, I63.342, I63.349, I63.39, I63.40, I63.411, I63.412, I63.419, I63.421, I63.422, I63.429, I63.431, I63.432, I63.439, I63.441, I63.442, I63.449, I63.49, I63.50, I63.511, I63.512, I63.519, I63.521, I63.522, I63.529, I63.531, I63.532, I63.539, I63.541, I63.542, I63.549, I63.59, I63.6, I63.8, I63.9<br>OR:<br>'Final clinical diagnosis related to stroke' = Ischemic Stroke<br>AND:<br>'IV tPA initiated at this hospital' = YES*<br>*Thrombolytic therapy for stroke includes: Activase, Alteplase, IV t-PA, or Recombinant t-PA Tissue plasminogen activator.<br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |
| Exclusions | Denominator Exclusions:<br>•Patients less than 18 years of age<br>•Patient stroke occurred while in hospital<br>•Patients received in transfer from the inpatient, or outpatient of another facility |

| | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|
| | •Patients that receive tPA greater than 4.5 hours after Last Known Well<br>•Clinical trial<br>Denominator Exceptions:<br>Patients with documented Eligibility or Medical reason for delay in treatment [eg, social, religious, initial refusal, hypertension requiring aggressive control with intravenous medications, inability to confirm patients eligibility, or further diagnostic evaluation to confirm stroke for patients with hypoglycemia (blood glucose < 50); seizures, or major metabolic disorders, or management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure requiring intubation), or investigational or experimental protocol for thrombolysis.] |
| Exclusion details | The AHA/ASA distinguishes between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For measure 1952, Time to Intravenous Thrombolytic Therapy, exclusions include patients who are less than 18 years of age, patients whose stroke occurred while in the hospital, patients that received in transfer from the inpatient or outpatient of another facility, patients that receive tPA greater than 4.5 hours after Last Known Well, and patients enrolled in clinical trials. Exclusions are included in the measure specifications.<br>Measure Exceptions<br>Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure 1952, Time to Intravenous Thrombolytic Therapy exceptions may include medical reason(s) [eg, hypertension requiring aggressive control with intravenous medications, inability to confirm patient eligibility, or further diagnostic evaluation needed to confirm stroke for patients with hypoglycemia (blood glucose <50); seizures, major metabolic disorders, or management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure requiring intubation], or investigational or experimental protocol for thrombolysis, or eligibility reason(s) (eg, social, religious, initial refusal). Although this methodology does not require the external reporting of more detailed exception data, the AHA/ASA recommends that facilities document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The AHA/ASA also advocates the systematic review and analysis of each facility's exceptions data to identify practice patterns and opportunities for quality improvement.<br>Additional details are as follows:<br>Measure Exclusions:<br>'Age' < 18 years<br>OR<br>['Date/time IV thrombolytic therapy initiated' minus 'Date/time Last Known Well'] > 4.5 hours<br>OR<br>'Patient location when stroke symptoms discovered' = stroke occurred after hospital 'Arrival Date/Time' |

| | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|
| | OR<br>'How patient arrived at your hospital' = transfer from other hospital<br>OR<br>'Was patient enrolled in a clinical trial in which patients with the same condition as the measure set were being studied' = yes<br>OR<br>If any of the following is unknown, blank, or incomplete (aka, missing time): 'Arrival Date/Time', 'Date/time IV thrombolytic therapy initiated', 'Date/time Last Known Well'<br>Measure Exceptions:<br>['Date/time IV thrombolytic therapy initiated' minus 'Arrival Date/Time'] > 60 minutes<br>AND<br>Eligibility Reason OR Medical Reason = Present<br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |
| Risk Adjustment | No risk adjustment or risk stratification<br>No risk adjustment or risk stratification |
| Stratification | Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnici |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | Rate is determined by calculating those eligible patients meeting the numerator specification divided by those meeting the denominator specification.<br>1) Check to see if there is an ICD-9/ICD-10 principal diagnosis of ischemic stroke; exclude those patients without an appropriate diagnosis code.<br>2) Check to see if patient had an inpatient stroke; exclude those patients with inpatient stroke<br>3) Check to see if patient is 18 years or older; exclude those patients less than 18 years of age<br>4) Check to see if patient is in a clinical trial; exclude those patients who were in a clinical trial<br>5) Check to see patient arrival date is documented; exclude those patients for which arrival date is unable to be determined (blank/unknown)<br>6) Check to see if patient arrival time is documented; exclude those patients for which arrival time is unable to be determined (blank/unknown)<br>7) Check to see if patient was transferred from another hospital; exclude those patients who were transferred from another hospital<br>8) Check to see if patient had IV thrombolytic therapy initiated; exclude those patients for whom IV thrombolytic therapy was not initiated<br>9) Check thrombolytic initiation date; exclude those patient for which thrombolytic initiation date is unable to be determined (blank/unknown)<br>10) Check thrombolytic initiation time; exclude those patients for which thrombolytic initiation time is unable to be determined (blank/unknown)<br>11) IV Thrombolytic Initiation Date/Time should not be less than (aka, should not be documented as occurring prior to) hospital arrival date/time; exclude those patients for whom arrival IV thrombolytic initiation date/time is less than hospital arrival date/time<br>12) Check to see date/time last known well; exclude patients for whom date/time last known well is unable to be determined (blank/unknown)<br>13) Check to see timing in hours. Timing (IV Thrombolytic Initiation Date/Time - Date/Time Last Known well) should be less than or equal to 4.5 hours. If greater than 4.5 hours exclude |

| | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|
| | patients.<br>14) If timing is less than or equal to 4.5 hours, check to see if timing for IV thrombolytic therapy time (IV Thrombolytic Initiation Date/Time - Arrival Date/Time) is less than or equal to 60 minutes. If time was greater than 60 minutes, determine if patient had a valid documented exception/reason for delay.<br>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.<br>For detailed measure algorithm see attached. Available in attached appendix at A.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0437 : STK 04: Thrombolytic Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measure #1952 assesses of the patients who received tPA within 4.5 hours, the percentage of patients who received tPA within the optimal time window of = 60 minutes. This measure focuses on the timely administration of tPA rather than whether or not the treatment should be administered. Data demonstrates that shortening door-to-needle times improves outcomes for acute ischemic stroke. Conversely, Measure #0437 assesses whether or not therapy was administered in eligible patients. As a result, the specifications differ where needed based on different populations and different focal points of the measure.<br><br>5b.1 If competing, why superior or rationale for additive value: |

| | 2111 Antipsychotic Use in Persons with Dementia |
|---|---|
| Status | Submitted |
| Steward | Pharmacy Quality Alliance |
| Description | The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic medication without evidence of a psychotic disorder or related condition. |
| Type | Process |
| Data Source | Administrative claims Health Plan Medical and Pharmacy Claims. Health Plan member enrollment information.<br>No data collection instrument provided Attachment Full_Listing_and_Conversion_Tables_ICD_9_to_10.xlsx |
| Level | Health Plan, Population : National |
| Setting | Other, Pharmacy The level of analysis for this measure is the prescription drug health plan, but it contains claims data from multiple care settings, including ambulatory, skilled nursing facility, pharmacy, etc. |
| Numerator Statement | The number of patients in the denominator who had at least one prescription and > 30 days supply for any antipsychotic medication during the measurement period and do not have a diagnosis of schizophrenia, bipolar disorder, Huntington's disease or Tourett |
| Numerator Details | The number of patients in the denominator who had at least one prescription and > 30 days supply for any antipsychotic medication during the measurement period (See Table Dementia C) and do not have a diagnosis for schizophrenia, bipolar disorder, Huntington's disease or Tourette's Syndrome (See Table Dementia D)<br>Table Dementia C: Antipsychotic Medications<br>Aripiprazole<br>Asenapine<br>Chlorpromazine<br>Clozapine<br>Fluphenazine<br>Haloperidol<br>Iloperidone<br>Loxapine<br>Lurasidone<br>Olanzapine<br>Paliperidone<br>Perphenazine<br>Pimozide<br>Quetiapine<br>Risperidone<br>Thioridazine<br>Thiothixene<br>Trifluoperazine<br>Ziprasidone<br>Note: The active ingredients are limited to oral, sublingual, injectable and intramuscular formulations only. Includes combination products.<br>Table Dementia D: Disease Codes for Specific Disorders for Exclusion<br>ICD-9<br>Schizophrenia: |

| | 2111 Antipsychotic Use in Persons with Dementia |
|---|---|
| | 295.0x to 295.9x<br>Bipolar/Manic Disorder:<br>296.0x<br>296.1x<br>296.4x to 296.9x<br>Huntington's disease<br>333.4<br>Tourette's Syndrome<br>307.23<br>ICD-10<br>Schizophrenia/schizophreniform<br>F20.0 F20.1 F20.2 F20.3<br>F20.5 F20.81<br>F20.89 F20.9 F25.9<br>Mania<br>F30.10 F30.11 F30.12 F30.13 F30.2<br>F30.3 F30.4 F30.8 F30.9<br>Bipolar<br>F31.0 F31.10 F31.11 F31.12 F31.13 F31.2<br>F31.30 F31.31 F31.32 F31.4 F31.5 F31.60 F31.61<br>F31.62 F31.63 F31.64 F31.70 F31.71<br>F31.72 F31.73 F31.74 F31.75<br>F31.76 F31.77 F31.78 F31.81 F31.89 F31.9<br>Tourettes<br>F95.2<br>Huntington's Disease<br>G10<br>Psychotic disorder<br>F06.0 F06.2 F06.33<br>Other psychotic disorders<br>F21 F23 F24 F28 F29 F53<br>Schizoaffective<br>F25.0 F25.1 F25.8<br>MDD with psychotic features<br>F32.3 F33.3 |
| Denominator Statement | All patients 65 years of age and older continuously enrolled during the measurement period with a diagnosis of dementia and/or two or more prescription claims within the measurement year for a cholinesterase inhibitor or an NMDA receptor antagonist within |
| Denominator Details | All patients 66 years of age and older as of the last day of the measurement year who were continuously enrolled (i.e., had not disenrolled or died) during the measurement year with both pharmacy and medical benefits and had a diagnosis of dementia (Table Dementia A) and/or two or more prescription claims for a cholinesterase inhibitor or an NMDA receptor antagonist (Dementia Table B) within the measurement year where the sum of days supply is >60.<br>For a beneficiary for whom enrollment is verified monthly, the member may not have more |

| | 2111 Antipsychotic Use in Persons with Dementia |
|---|---|
| | than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 consecutive days] is not considered continuously enrolled).<br>Table Dementia B: Cholinesterase Inhibitors and NMDA Receptor Antagonists<br>donepezil<br>rivastigmine<br>galantamine<br>memantine<br>Note: The active ingredients are limited to oral and transdermal formulations only.<br>Dementia Table A: Codes to Identify Dementia<br>ICD-9<br>290.0<br>290.1x<br>290.2x<br>290.3<br>290.4x<br>294.10<br>294.20<br>331.0<br>331.82<br>ICD-10<br>F01.51 F02.80 F03.90<br>F05<br>G30.9<br>G31.83<br>A81.00 A81.01 A81.09<br>F01.50 F02.81 F03.91<br>F10.27 F10.96 F10.97<br>F13.27 F13.97<br>F18.97<br>F19.17 F19.27 F19.97<br>G30.0 G30.1 G30.8<br>G31.01 G31.09 G31.1 |
| Exclusions | N/A |
| Exclusion details | N/A |
| Risk Adjustment | No risk adjustment or risk stratification<br>N/A |
| Stratification | N/A |
| Type Score | Rate/proportion better quality = lower score |
| Algorithm | Step One:<br>Calculate the denominator by identifying the number of all eligible patients with either:<br>1) A diagnosis of dementia (Table Dementia A) and/or<br>2) Individuals with two or more prescription claims (within the measurement year) for a cholinesterase inhibitor or an NMDA receptor antagonist (Table Dementia B) where the sum of days supply is >60 |

| | 2111 Antipsychotic Use in Persons with Dementia |
|---|---|
| | Step Two:<br>Calculate the numerator by identifying the number of persons in the denominator who have greater than 30 days supply for any antipsychotic medication during the measurement period (Table Dementia C) and do not have a diagnosis for schizophrenia, bipolar disorder, Huntington's Disease or Tourette's Syndrome (Table Dementia D).<br>Step Three:<br>Divide the numerator (step two) by the denominator (step one) and multiply times 100 to calculate the rate as a percentage. |
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: |

| | 2834 STK 04: Thrombolytic Therapy |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-4, Thrombolytic Therapy, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program. |
| Type | Process |
| Data Source | Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1).<br>No data collection instrument provided Attachment STK4_v5_Wed_Apr_01_12.15.32_CDT_2015.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of when it was witnessed or reported that the patient was last known to be without the signs and symptoms of |
| Numerator Details | Thrombolytic (t-PA) Therapy Administration<br>• Thrombolytic (t-PA) Therapy is represented with the QDM datatype and value set of Medication, Administered: Thrombolytic (t-PA) Therapy (OID: 2.16.840.1.113883.3.117.1.7.1.226)<br>Baseline State<br>• Baseline State is represented with the QDM datatype and value set of Physical Exam, Performed: Baseline State (OID: 2.16.840.1.113883.3.117.1.7.1.417)<br>Emergency Department Visit<br>• Emergency Department Visit is represented with the QDM datatype and value set of Encounter, Performed: Emergency Department Visit (OID: 2.16.840.1.113883.3.117.1.7.1.292)<br>Time of Symptom Onset<br>• Time of Symptom Onset is represented with the QDM datatype and value set of Physical Exam, Performed: Time of Symptom Onset (OID: 2.16.840.1.113762.1.4.1045.14)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Denominator Statement | Ischemic stroke patients admitted through the Emergency Department whose time of arrival is within 2 hours (less than or equal to 120 minutes) of the 1) time they were known to be at their baseline state of health; or 2) time of symptom onset if time last |
| Denominator Details | Principal Diagnosis of Ischemic Stroke<br>• Ischemic Stroke is represented with the QDM datatype and value set of Diagnosis, Active: Ischemic Stroke (OID: 2.16.840.1.113883.3.117.1.7.1.247) |

| | 2834 STK 04: Thrombolytic Therapy |
|---|---|
| | • Ordinality: Principal (OID: 2.16.840.1.113883.3.117.1.7.1.14)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM data type and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>Emergency Department Visit<br>• Emergency Department Visit is represented with the QDM datatype and value set of Encounter, Performed: Emergency Department Visit (OID: 2.16.840.1.113883.3.117.1.7.1.292)<br>Baseline State<br>• Baseline State is represented with the QDM datatype and value set of Physical Exam, Performed: Baseline State (OID: 2.16.840.1.113883.3.117.1.7.1.417)<br>Time of Symptom Onset<br>• Time of Symptom Onset is represented with the QDM datatype and value set of Physical Exam, Performed: Time of Symptom Onset (OID: 2.16.840.1.113762.1.4.1045.14)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Exclusions | Denominator Exclusions:<br>None.<br>Denominator Exceptions:<br>• Patients with comfort measures documented on the day of or the day after arrival<br>• Patients with intra-venous or intra-arterial Thrombolytic (t-PA) Therapy prior to arrival<br>• Patients with documentation of a National Institutes for Health Stroke Scale (NIHSS) score of zero in the emergency department<br>• Patients with Medical Reasons for not initiating IV thrombolytics documented by a physician/APN/PA or pharmacist on the day of or the day after arrival<br>• Patients with any of the following results within 180 minutes of the 1) time they were known to be at their baseline state of health; or 2) time of symptom onset:<br>o Prothrombin Time > 15 seconds<br>o Platelet Count <100,000<br>o INR>1.7<br>o Partial Thromboplastin Time > 40 seconds<br>o Systolic Blood Pressure > 185 mmHg<br>o Diastolic Blood Pressure > 110 mmHg<br>o Patient refusal |
| Exclusion details | Comfort Measures<br>• Comfort Measures are represented with the QDM datatypes and value set of:<br>• Intervention, Order: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>• Intervention, Performed: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>Reasons for Not Initiating IV Thrombolytic<br>• Medical Reason For Not Initiating IV Thrombolytic is represented with either of the following QDM datatypes and value sets:<br>o Medication, Order not done: Medical Reason (OID: 2.16.840.1.113883.3.117.1.7.1.473)<br>o Medication, Administered not done: Medical Reason (OID: 2.16.840.1.113883.3.117.1.7.1.473) |

| | 2834 STK 04: Thrombolytic Therapy |
|---|---|
| | o Medication, Order: t-PA ingredient specific (OID: 2.16.840.1.113762.1.4.1021.6)<br>o Medication, Administered: Thrombolytic (t-PA) Therapy (OID: 2.16.840.1.113883.3.117.1.7.1.226)<br>• Laboratory Test, Performed: Prothrombin Time (OID: 2.16.840.1.113762.1.4.1045.24)<br>• Laboratory Test, Performed: Platelet Count (OID: 2.16.840.1.113883.3.117.1.7.1.267)<br>• Laboratory Test, Performed: INR (OID: 2.16.840.1.113883.3.117.1.7.1.213)<br>• Laboratory Test, Performed: Partial Thromboplastin Time (OID: 2.16.840.1.113762.1.4.1045.25)<br>• Physical Exam, Performed: Systolic Blood Pressure (OID: 2.16.840.1.113883.3.526.2.1044)<br>• Physical Exam, Performed: Diastolic Blood Pressure (OID: 2.16.840.1.113883.3.526.2.1045)<br>• Medication, Administered not done: Patient Refusal (OID: 2.16.840.1.113883.3.117.1.7.1.93)<br>• Medication, Order not done: Patient Refusal (OID: 2.16.840.1.113883.3.117.1.7.1.93)<br>Thrombolytic (t-PA) Therapy Already Administered<br>• Thrombolytic (t-PA) Therapy is represented with either of the following QDM datatypes and value sets:<br>o Medication, Administered: Thrombolytic (t-PA) Therapy (OID: 2.16.840.1.113883.3.117.1.7.1.226)<br>o Procedure, Performed: Intravenous Thrombolytic (t-PA) Therapy (OID: 2.16.840.1.113762.1.4.1045.15)<br>National Institutes for Health Stroke Scale (NIHSS)<br>• National Institutes for Health Stroke Scale (NIHSS) is represented with the QDM datatype and value set Risk Category Assessment: National Institute of Health Stroke Scale (OID: 2.16.840.1.113883.3.117.1.7.1.269)<br>Baseline State<br>• Baseline State is represented with the QDM datatype and value set of Physical Exam, Performed: Baseline State (OID: 2.16.840.1.113883.3.117.1.7.1.417)<br>Time of Symptom Onset<br>• Time of Symptom Onset is represented with the QDM datatype and value set of Physical Exam, Performed: Time of Symptom Onset (OID: 2.16.840.1.113762.1.4.1045.14)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM data type and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>Emergency Department Visit<br>• Emergency Department Visit is represented with the QDM datatype and value set of Encounter, Performed: Emergency Department Visit (OID: 2.16.840.1.113883.3.117.1.7.1.292)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable. |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | See attached HQMF file. Available at measure-specific web page URL identified in S.1 |

| | 2834 STK 04: Thrombolytic Therapy |
|---|---|
| Copyright / Disclaimer | 5.1 Identified measures: 0288 : Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival<br>0242 : Stroke and Stroke Rehabilitation: Tissue Plasminogen Activator (t-PA) Considered<br>0437 : STK 04: Thrombolytic Therapy<br>0164 : Fibrinolytic Therapy received within 30 minutes of hospital arrival<br>1952 : Time to Intravenous Thrombolytic Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0288 and 0164 are AMI (Acute Myocardial Infarction) measures. They are part of the Centers for Medicare & Medicaid Services/The Joint Commission aligned measures relating to the administration of fibrinolytic therapy for hospital inpatients and are harmonized with 0437 to the extent that the measures utilize some of the same data elements. The target population for 0288 and 0164 is inpatients with an ICD-10-CM Principal Diagnosis Code for acute myocardial infarction. The target population for 0437 differs in that it includes patients hospitalized for acute ischemic stroke. In addition, the evidence around the timeframe for administration of therapy is different for the AMI and ischemic stroke populations, and 0288 and 0164 include administration of lytic drugs other than activase/alteplase/IV t-PA/recombinant tissue plasminogen activator (rt-PA). Measure 0164 will be removed from the CMS/The Joint Commission aligned measures starting with 01/01/2016 discharges. The target population for measure 1952 from the American Heart Association/American Stroke Association also includes patients hospitalized for acute ischemic stroke; however, the measure captures average door-to-needle time and uses a target of less than 60 minutes rather than the proportion of patients who arrive within 2 hours and receive t-PA within 3 hours of time last known well. Measure 0242 is a physician performance measure with a targeted population of ischemic stroke patients identified through CPT codes and could extend to the outpatient setting. This measure evaluates physician practice as opposed to hospital processes. It is no longer NQF-endorsed. NQF#0437: STK 04: Thrombolytic Therapy: The measures are completely harmonized to the extent possible, given the fact that the data source for #0437 is the paper medical record, and the data source for #2834 is the electronic health record.<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable. |

| | 2836 STK-06: Discharged on Statin Medication |
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| Status | Submitted |
| Steward | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-6, Discharged on Statin Medication, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program. |
| Type | Process |
| Data Source | Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1).<br>No data collection instrument provided Attachment DischargedonStatinMedication_v4_Wed_Apr_01_12.18.50_CDT_2015.xls |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Patients prescribed statin medication at hospital discharge. |
| Numerator Details | Statin Medication<br>• Statin Medication is represented with the QDM datatype and value set of Medication, Discharge: Statin (OID: 2.16.840.1.113883.3.117.1.7.1.225)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Denominator Statement | Patients with a principal diagnosis of ischemic stroke. |
| Denominator Details | Principal Diagnosis of Ischemic Stroke<br>• Ischemic Stroke is represented with the QDM datatype and value set of Diagnosis, Active: Ischemic Stroke (OID: 2.16.840.1.113883.3.117.1.7.1.247)<br>• Ordinality: Principal (OID: 2.16.840.1.113883.3.117.1.7.1.14)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Exclusions | Denominator Exclusions: |

| | 2836 STK-06: Discharged on Statin Medication |
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| | Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.<br>Patients with comfort measures documented.<br>Patients discharged to another hospital<br>Patients who left against medical advice<br>Patients who expired<br>Patients discharged to home for hospice care<br>Patients discharged to a health care facility for hospice care<br>Patients with an LDL-c of less than 70 mg/dL <30 days prior to arrival or any time during the hospital stay<br>Denominator Exceptions:<br>Patients with a reason for not prescribing statin medication at discharge. |
| Exclusion details | Denominator Exclusion Data Elements:<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>Discharge Status (modeled as Attributes of the above Non-Elective Inpatient Encounter)<br>• Discharge status: Left Against Medical Advice (OID: 2.16.840.1.113883.3.117.1.7.1.308)<br>• Discharge status: Patient Expired (OID: 2.16.840.1.113883.3.117.1.7.1.309)<br>• Discharge status: Discharge To Acute Care Facility (OID: 2.16.840.1.113883.3.117.1.7.1.87)<br>• Discharge status: Discharged to Home for Hospice Care (OID: 2.16.840.1.113883.3.117.1.7.1.209)<br>• Discharge status: Discharged to Health Care Facility for Hospice Care (OID: 2.16.840.1.113883.3.117.1.7.1.207)<br>Comfort Measures<br>• Comfort Measures are represented with the QDM datatypes and value set of:<br>• Intervention, Order: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>• Intervention, Performed: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>Emergency Department Visit<br>• Emergency Department Visit is represented with the QDM datatype and value set of Encounter, Performed: Emergency Department Visit (OID: 2.16.840.1.113883.3.117.1.7.1.292)<br>LDL-c<br>• LDL-c is represented with the QDM datatype and value set of Laboratory Test, Performed: LDL-c (OID: 2.16.840.1.113883.3.117.1.7.1.215)<br>Denominator Exceptions Data Elements:<br>Reasons for Not Prescribing Statin Medication<br>• Statin Allergy is represented with the QDM datatype and value set of Medication, Allergy: Statin Allergen (OID: 2.16.840.1.113883.3.117.1.7.1.423)<br>• Statin Ingredient Specific Medication is represented with the QDM datatype and value set of Medication, Discharge: Statin ingredient specific (OID: 2.16.840.1.113762.1.4.1021.7)<br>• Medical Reason is represented with the QDM datatype and value set of Medication, Discharge not done: Medical Reason (OID: 2.16.840.1.113883.3.117.1.7.1.473) |

| | 2836 STK-06: Discharged on Statin Medication |
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| | • Patient Refusal is represented with the QDM datatype and value set of Medication, Discharge not done: Patient Refusal (OID: 2.16.840.1.113883.3.117.1.7.1.93)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable. |
| Stratification | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | See attached HQMF file. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0639 : Statin Prescribed at Discharge<br>0074 : Chronic Stable Coronary Artery Disease: Lipid Control<br>0439 : STK-06: Discharged on Statin Medication<br>0547 : Diabetes and Medication Possession Ratio for Statin Therapy<br>0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0545 : Adherence to Statins for Individuals with Diabetes Mellitus<br>0118 : Anti-Lipid Treatment Discharge<br>1519 : Statin Therapy at Discharge after Lower Extremity Bypass (LEB)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Three statin therapy measures were identified from the NQF database. All three measures address target diagnoses other than ischemic stroke or specific surgical procedures for patients 18 years or older: 0074 Coronary Artery Disease; 0118 isolated Coronary Artery Bypass Graft (CABG); and, 1519 Lower Extremity Bypass (LEB). Measure 1519 addresses inpatient organizational performance. The other two measures, 0074 and 0118 are provider-level measures in the ambulatory care setting. NQF# STK-06: Discharged on Statin Medication: The measures are completely harmonized to the extent possible, given the fact that the data source for #0439 is the paper medical record, and the data source for #2836 is the electronic health record.<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable. |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | Proportion of subarachnoid hemorrhage (SAH) patients age 18 years and older for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.<br>This is the sixth measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate). Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided Attachment Copy_of_AppendixACSTKTables_ICD10codes-635878790579131970.xlsx |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital. |
| Numerator Details | Six data elements are used to calculate the numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>• Nimodipine Administration – Documentation that nimodipine was administered at this hospital. Nimodipine is a cerebroselective calcium channel blocker that inhibits calcium transport into vascular smooth muscle cells, thereby suppressing contractions. Nimodipine is used in the treatment of subarachnoid hemorrhage patients to prevent or limit the severity of cerebral vasospasm. Allowable Values: Yes or No/UTD.<br>• Nimodipine Administration Date – The month, day, and year that the first dose of nimodipine was administered to a patient with subarachnoid hemorrhage at this hospital.<br>• Nimodipine Administration Time – The time (military time) for which the first dose of nimodipine was administered to a patient with subarachnoid hemorrhage at this hospital.<br>• Reason for Not Administering Nimodipine Treatment - Reasons for not administering nimodipine treatment:<br>o Nimodipine allergy<br>o Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist<br>Allowable Values: Yes or No/UTD.<br>Patients are eligible for the numerator population when the Nimodipine Administration Date and Nimodipine Administration Time minus the Arrival Date and Arrival Time are greater than |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | or equal to zero minutes and less than or equal to 1440 minutes, OR the Reason for Not Administering Nimodipine Treatment equals allowable values 'Yes'. |
| Denominator Statement | SAH patients |
| Denominator Details | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.2a<br>7 data elements are used to calculate the denominator. Data elements and definitions:<br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br>• Birthdate: The month, day, and year the patient was born.<br>• Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. Allowable Values: Yes or No/UTD.<br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).<br>Allowable Values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing unclear); 4 (Not documented/UTD).<br>• Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ICD-10-CM Principal Diagnosis Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. |
| Exclusions | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Patients enrolled in Clinical Trials<br>• Patients discharged within 24 hours of arrival at this hospital |
| Exclusion details | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay greater than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br>• Patients with Comfort Measures Only documented:<br>o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br>• Patients enrolled in a Clinical Trial.<br>o Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients who expire within 24 hours of arrival at this hospital<br>o Patients expiration equals Discharge Date and Discharge Time minus Arrival Date and Arrival |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | Time greater than or equal to 0 minutes and less than 1440 minutes |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not Applicable |
| Stratification | Not Applicable |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag.<br>1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br>4. Check Patient Age<br>a. If the Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.<br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay<br>a. If the Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br>7. Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM Principal Diagnosis Code to determine the CSTK sub-population.<br>8. Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD- |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | 10-PCS Principal Or Other Procedure Codes.<br>i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal Or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>CSTK-06: Nimodipine Treatment Administered<br>Numerator: SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.<br>Denominator: SAH patients<br>Variable Key: Timing I, Timing II<br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.2a, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.2a, continue processing and proceed to Comfort Measures Only.<br>3. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Arrival Date.<br>5. Check Arrival Date<br>a. If Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Arrival Time.<br>6. Check Arrival Time<br>a. If Arrival Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|
| | c. If Arrival Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Discharge Date.<br>7. Check Discharge Date<br>a. If Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Discharge Time.<br>8. Check Discharge Time<br>a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br>9. Calculate Timing I. Timing I, in minutes, is equal to the Discharge Date and the Discharge Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is greater than or equal to zero and less than 1440, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If the time in minutes is greater than or equal to 1440, the case will proceed to Nimodipine Administration.<br>10. Check Nimodipine Administration<br>a. If Nimodipine Administration is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration equals No, continue processing and proceed to step 14 and check Reason for Not Administering Nimodipine Treatment.<br>c. If Nimodipine Administration equals Yes, continue processing and proceed to Nimodipine Administration Date.<br>11. Check Nimodipine Administration Date<br>a. If Nimodipine Administration Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Nimodipine Administration Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Nimodipine Administration Time.<br>12. Check Nimodipine Administration Time<br>a. If Nimodipine Administration Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Nimodipine Administration Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation.<br>13. Calculate Timing II. Timing II, in minutes, is equal to the Nimodipine Administration Date |

| | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | and the Nimodipine Administration Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is greater than 1440, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 1440, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing.<br>14. Check Reason for Not Administering Nimodipine Treatment<br>a. If Reason for Not Administering Nimodipine Treatment is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Administering Nimodipine Treatment equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Reason for Not Administering Nimodipine Treatment equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
|---|---|
| Status | Submitted |
| Steward | The Joint Commission |
| Description | Proportion of ischemic stroke patients age 18 years or older for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., intra-venous (IV) thrombolytic (t-PA) therapy, or intra-arterial (IA) thrombolytic (t-PA) therapy, or mechanical endovascular reperfusion (MER) therapy) in patients undergoing recanalization therapy and documented in the medical record, or documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy.<br>This is the first in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate); CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided Attachment Copy_of_AppendixACSTKTables_ICD10codes-635878789321771970.xlsx |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients for whom an initial NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, OR documented within 12 hours of arrival at the hospital em |
| Numerator Details | Nine data elements are used to calculate the numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>• ICD-10-PCS Other Procedure Code Date – The month, date, and year when the other procedure(s) was performed.<br>• ICD-10-PCS Other Procedure Code Time - The time (military time) when the other procedure(s) was performed.<br>• ICD-10-PCS Principal Procedure Code Date – The month, date, and year when the principal procedure was performed.<br>• ICD-10-PCS Principal Procedure Code Time - The time (military time) when the principal procedure was performed.<br>• Initial NIHSS Score Date – The month, date, and year the NIHSS score was first performed at the hospital.<br>• Initial NIHSS Score Performed – Documentation of the first National Institutes of Health Stroke Scale (NIHSS) score that was done at this hospital. The NIHSS measures several aspects |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | of brain function, including consciousness, vision, sensation, movement, speech, and language. The NIHSS serves several purposes, but its main use in clinical medicine is during the assessment of whether or not the degree of disability caused by a given stroke merits treatment with t-PA. Score documentation my range from 0 to 42. Allowable Values: Yes or No/UTD.<br>• Initial NIHSS Score Time - The time (military time) for which the NIHSS score was first performed at the hospital.<br>Patients are eligible for the numerator population when the ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time minus the Initial NIHSS Score Date and Initial NIHSS Score Time are greater than or equal to zero minutes, OR the Initial NIHSS Score Date and Initial NIHSS Score Time minus the Arrival Date and Arrival Time are greater than or equal to zero minutes and less than or equal to 720 minutes. |
| Denominator Statement | Ischemic stroke patients who arrive at this hospital emergency department (ED). |
| Denominator Details | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1<br>11 data elements are used to calculate the denominator. Data elements and definitions:<br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br>• Birthdate: The month, day, and year the patient was born.<br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR). Allowable Values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing unclear); 4 (Not documented/UTD).<br>• Direct Admission – Documentation that the patient was transferred from another acute care facility and taken directly to the operating room or interventional suite prior to hospital admission, or admitted directly to intensive care or other unit of the hospital. Allowable Values: Yes or No/UTD.<br>• Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ED Patient - Documentation that the patient received care in a dedicated emergency department of the facility. Allowable Values: Yes or No/UTD.<br>• Elective Carotid Intervention - Documentation demonstrates that the current admission is solely for performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting). Allowable Values: Yes or No/UTD.<br>• ICD-10-PCS Other Procedure Codes: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) codes identifying all significant procedures other than the principal procedure.<br>• ICD-10-CM Principal Diagnosis Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | • ICD-10-CM Principal Procedure Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. |
| Exclusions | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Patients admitted for Elective Carotid Intervention<br>• Patients who do not undergo recanalization therapy and are discharged within 12 hours of arrival at this hospital |
| Exclusion details | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay greater than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival:<br>o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br>• Patients admitted for Elective Carotid Intervention:<br>o Elective Carotid Intervention includes procedures of the head and neck as defined in Appendix A, Table 8.3 Carotid Intervention Procedures when medical record documentation also states that the reason for the patient's admission to the hospital was for the performance of that procedure and not for the treatment of acute ischemic stroke.<br>o An elective admission is documented as a pre-planned or scheduled admission to the hospital.<br>• Patients who do not undergo recanalization therapy and are discharged within 12 hours of hospital arrival.<br>o Within 12 hours of hospital arrival equals Discharge Date and Discharge Time minus Arrival Date and Arrival Time for patients who do not have an ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.1a Thrombolytic Agent Procedures or Table 8.1b Mechanical Endovascular Reperfusion Therapy Procedures. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not Applicable |
| Stratification | Not Applicable |
| Type Score | Rate/proportion better quality = higher score |
| Algorithm | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag.<br>1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br><br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br>4. Check Patient Age<br>a. If the Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.<br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay<br>a. If the Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br>7. Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM Principal Diagnosis Code to determine the CSTK sub-population.<br>8. Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD-10-PCS Principal Or Other Procedure Codes.<br>i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal Or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients<br>Numerator: Ischemic stroke patients for whom a NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, OR documented within 12 hours of hospital arrival for patients who do not |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | undergo recanalization therapy.<br>Denominator: Ischemic stroke patients who arrive at this hospital emergency department (ED)<br>Variable Key: Timing I, Timing II, Timing III<br><br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to ED Patient.<br>3. Check ED patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ED Patient equals No, continue processing and proceed to step 4 to check Direct Admission.<br>c. If ED Patient equals Yes, continue processing and proceed to step 5 to check Comfort Measures Only.<br>4. Check Direct Admission<br>a. If Direct Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Direct Admission equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Direct Admission equals Yes, continue processing and proceed to Comfort Measures Only.<br>5. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Elective Carotid Intervention.<br>6. Check Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Initial NIHSS Score Performed.<br>7. Check Initial NIHSS Score Performed<br>a. If Initial NIHSS Score Performed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Performed equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Initial NIHSS Score Performed equals Yes, continue processing and proceed to Initial NIHSS |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | Score Date.<br>8. Check Initial NIHSS Score Date<br>a. If Initial NIHSS Score Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Initial NIHSS Score Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Initial NIHSS Score Time.<br>9. Check Initial NIHSS Score Time<br>a. If Initial NIHSS Score Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Initial NIHSS Score Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes.<br>10. Check ICD-10-PCS Principal or Other Procedure Codes<br>a. If all missing or none ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, continue processing and proceed to step 14 and check Discharge Date.<br>b. If any ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Code Date.<br>11. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure Code Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to ICD-10-PCS Principal or Other Procedure Code Time.<br>12. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure Code Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br>13. Calculate Timing I. Timing I, in minutes, is equal to ICD-10-PCS Principal or Other Procedure Code Date and ICD-10-PCS Principal or Other Procedure Code Time minus the Initial NIHSS Score Date and Initial NIHSS Score Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing.<br>14. Check Discharge Date |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| | a. If Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Discharge Time.<br>15. Check Discharge Time<br>a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Arrival Date.<br>16. Check Arrival Date<br>a. If Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Arrival Time.<br>17. Check Arrival Time<br>a. If Arrival Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation.<br>18. Calculate Timing II. Timing II, in minutes, is equal to the Discharge Date and the Discharge Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than 720, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to 720, continue processing and proceed to the Timing III calculation.<br>19. Calculate Timing III. Timing III, in minutes, is equal to the Initial NIHSS Score Date and the Initial NIHSS Score Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is greater than 720, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to zero and less than or equal to 720, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Copyright / | 5.1 Identified measures: |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients |
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| Disclaimer | 5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| Status | Submitted |
| Steward | The Joint Commission |
| Description | Proportion of SAH and ICH stroke patients age 18 years or older for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.<br>This is the third measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible. |
| Type | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided Attachment Copy_of_AppendixACSTKTables_ICD10codes.xlsx |
| Level | Facility, Population : National |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | CSTK-03 The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; OR documented within 6 hours of arrival at th |
| Numerator Details | Twelve data elements are used to calculate the numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>• ICD-10-PCS Other Procedure Code Date – The month, date, and year when the other procedure(s) was performed.<br>• ICD-10-PCS Other Procedure Code Time - The time (military time) when the other procedure(s) was performed.<br>• ICD-10-PCS Principal Procedure Code Date – The month, date, and year when the principal procedure was performed.<br>• ICD-10-PCS Principal Procedure Code Time - The time (military time) when the principal procedure was performed.<br>• Initial Hunt and Hess Scale Date - The month, date, and year the Hunt and Hess Scale was first performed at the hospital.<br>• Initial Hunt and Hess Scale Performed - Documentation of the first Hunt and Hess Scale that was done at this hospital. The Hunt and Hess Scale is a grading system used to classify the |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | severity of a subarachnoid hemorrhage based on the patient's clinical condition. The scale ranges from a score of 1 to 5. It is used as a predictor of prognosis and outcome with a higher grade correlating to a lower survival rate. Allowable Values: Yes or No/UTD.<br>• Initial Hunt and Hess Scale Time - The time (military time) for which the Hunt and Hess Scale was first documented at the hospital.<br>• Initial ICH Score Date - The month, date, and year the ICH Score was first performed at the hospital.<br>• Initial ICH Score Performed - Documentation of the first ICH Score that was done at this hospital. The ICH Score is a clinical grading scale composed of factors related to a basic neuorological examination (Glasgow Coma Scale/GCS), a baseline patient characteristic (age), and initial neuroimaging (ICH volume, intraventicular hemorrhage (IVH), infratentorial or supratentorial origin). Score documentation may range from 0 to 6. The purpose of this grading scale is to provide a standard assessment tool that can be easily and rapidly determined at the time of ICH presentation by physicians without special training in stroke neurology and that will allow consistency in communication and treatment selection in clinical care and clinical research. Allowable Values: Yes or No/UTD.<br>• Initial ICH Score Time - The time (military time) for which the ICH score was first documented at the hospital.<br>Patients are eligible for the numerator population when the ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time minus the Initial Hunt and Hess Scale or ICH Score Date and Initial Hunt and Hess Scale or ICH Score Time are greater than or equal to zero minutes, OR the Initial Hunt and Hess Scale or ICH Score Date and Initial Hunt and Hess Scale or ICH Score Time minus the Arrival Date and Arrival Time are greater than or equal to zero minutes and less than or equal to 360 minutes. |
| Denominator Statement | SAH and ICH stroke patients who arrive at this hospital emergency department (ED). |
| Denominator Details | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for hemorrhagic stroke as defined in Appendix A, Table 8.2 (i.e., Table 8.2a and Table 8.2b) with or without aneurysm repair procedure (ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2d) or surgical intervention (ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2e)<br>11 data elements are used to calculate the denominator. Data elements and definitions:<br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br>• Birthdate: The month, day, and year the patient was born.<br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).<br>Allowable Values: 1 (Day 0 or Day 1); 2 (Day 2 or after); 3 (Timing unclear); 4 Not documented/UTD.<br>• Direct Admission – Documentation that the patient was transferred from another acute care facility and taken directly to the operating room or interventional suite prior to hospital admission, or admitted directly to intensive care or other unit of the hospital. Allowable Values: Yes or No/UTD. |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | • Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ED Patient - Documentation that the patient received care in a dedicated emergency department of the facility.<br>Allowable Values: Yes or No/UTD.<br>• ICD-10-CM Other Diagnosis Code: The other or secondary International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes associated with the diagnosis for this hospitalization.<br>• ICD-10-PCS Other Procedure Codes: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) codes identifying all significant procedures other than the principal procedure.<br>• ICD-10-CM Principal Diagnosis Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>• ICD-10-PCS Principal Procedure Code: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. |
| Exclusions | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Non-surgical patients discharged within 6 hours of arrival at this hospital<br>• Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma (ICD-9-CM Other Diagnosis Codes as defined in Appendix A, Table 8.2f) |
| Exclusion details | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay greater than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br>• Patients with Comfort Measures Only documented:<br>Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br>• Non-surgical patients discharged within 6 hours of arrival at this hospital.<br>o Within 6 hours of hospital arrival equals Discharge Date and Discharge Time minus Arrival Date and Arrival Time for patients who do not have an ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2d Aneurysm Repair Procedures or Table 8.1e Surgical Intervention Procedures.<br>• Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma (ICD-10-CM Other Diagnosis Codes as defined in Appendix A, Table 8.2f) |
| Risk Adjustment | No risk adjustment or risk stratification |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | Not Applicable |
| Stratification | The CSTK-03 measure is reported as an overall rate which includes SAH and ICH stoke patients for whom a severity measurement is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgica |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag.<br>1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br><br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br>4. Check Patient Age<br>a. If Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.<br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay<br>a. If Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br>7.  Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM Principal Diagnosis Code to determine the CSTK sub-population.<br>8.  Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section. |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | b. If ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes.<br>i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>CSTK-03: Severity Measurement Performed for SAH and ICH Patients (Overall Rate)<br>Numerator: The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record, OR documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.<br>Denominator: SAH and ICH stroke patients who arrive at this hospital emergency department (ED)<br>Variable Key: Timing I, Timing II, Timing III, Timing IV, Timing V<br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.2, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.2, continue processing and proceed to ICD-10-PCS Other Diagnosis Code.<br>3. Check ICD-10-PCS Other Diagnosis Code<br>a. If ICD-10-PCS Other Diagnosis Code is on Table 8.2f, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Other Diagnosis Code is not on Table 8.2f or all missing, continue processing and proceed to ED Patient.<br>4. Check ED patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ED Patient equals No, continue processing and proceed to Step 5 to check direct admission.<br>c. If ED Patient equals Yes, continue processing and proceed to Step 6 to check Comfort Measures Only.<br>5. Check Direct Admission<br>a. If Direct Admission is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b. |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | b. If Direct Admission equals No, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Direct Admission equals Yes, continue processing and proceed to Comfort Measures Only.<br>6. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to check ICD-10-CM Principal or Other Procedure Codes.<br>7. Check ICD-10-PCS Principal or Other Procedure Codes<br>a. If all missing or none ICD-10-PCS Principal or Other Procedure Codes is on Table 8.2d or 8.2e, continue processing and proceed to Step 20 to check Discharge Date.<br>b. If any ICD-10-PCS Principal or Other Procedure Codes is on Table 8.2d or 8.2e, continue processing and proceed to Initial Hunt and Hess Scale Performed.<br>8. Check Initial Hunt and Hess Scale Performed<br>a. If Initial Hunt and Hess Scale Performed is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Performed equals No, continue processing and proceed to step 14 to check Initial ICH Score Performed.<br>c. If Initial Hunt and Hess Scale Performed equals Yes, continue processing and proceed to check Initial Hunt and Hess Scale Date.<br>9. Check Initial Hunt and Hess Scale Date<br>a. If Initial Hunt and Hess Scale Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial Hunt and Hess Scale Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Initial Hunt and Hess Scale Time.<br>10. Check Initial Hunt and Hess Scale Time<br>a. If Initial Hunt and Hess Scale Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Time equals Unable to Determine (UTD), the case will proceed |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial Hunt and Hess Scale Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Date.<br>11. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure Code Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Time.<br>12. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure Code Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br>13. Calculate Timing I. Timing I, in minutes, is equal to the ICD-10-PCS Principal or Other Procedure Code Date and the ICD-10-PCS Principal or Other Procedure Code Time minus the Initial Hunt and Hess Scale Date and Initial Hunt and Hess Scale Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E for Overall Rate CSTK-03 and will be in the numerator population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>14. Check Initial ICH Score Performed<br>a. If Initial ICH Score Performed is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Performed equals No, the case will proceed to a Measure Category |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Performed equals Yes, continue processing and proceed to check Initial ICH Score Date.<br>15. Check Initial ICH Score Date<br>a. If Initial ICH Score Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Initial ICH Score Time.<br>16. Check Initial ICH Score Time<br>a. If Initial ICH Score Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Date.<br>17. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure Code Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Time.<br>18. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure Code Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation. |

| | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) |
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| | 19. Calculate Timing II. Timing II, in minutes, is equal to the ICD-10-PCS Principal or Other Procedure Code Date and the ICD-10-PCS Principal or Other Procedure Code Time minus the Initial ICH Score Date and Initial ICH Score Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E for overall rate CSTK-03 and will be in the numerator population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>20. Check Discharge Date<br>a. If Discharge Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Discharge Time.<br>21. Check Discharge Time<br>a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Arrival Date.<br>Continued in Section Ad.8 Additional Information/Comments. Available at measure-specific web page URL identified in S.1 |
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable |

| | 2872 Dementia- Cognitive Assessment |
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| Status | Submitted |
| Steward | PCPI |
| Description | Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period. |
| Type | Process |
| Data Source | Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record Not applicable<br>No data collection instrument provided Attachment EP_eCQM_DementiaCognitive_ValueSets_Jan2016.xlsx |
| Level | Clinician : Group/Practice, Clinician : Individual, Clinician : Team |
| Setting | Ambulatory Care : Clinician Office/Clinic, Behavioral Health/Psychiatric : Inpatient, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility, Other, Ambulatory Care : Urgent Care Occupational Therapy Services, 'Domiciliary', Rest Home or Custodial Care Services |
| Numerator Statement | Patients for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period<br>Definition:<br>Cognition can be assessed by the clinician during the patient's clinical history. Cognition can also be assessed by direc |
| Numerator Details | For EHR:<br>HQMF eMeasure developed and is included in this submission. |
| Denominator Statement | All patients, regardless of age, with a diagnosis of dementia |
| Denominator Details | For EHR:<br>HQMF eMeasure developed and is included in this submission. |
| Exclusions | Exceptions: Documentation of medical reason(s) for not assessing cognition (eg, patient with very advanced stage dementia, other medical reason)<br>Documentation of patient reason(s) for not assessing cognition |
| Exclusion details | Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure Dementia: Cognitive Assessment, exceptions may include medical reason(s) (eg, patients with very advanced stage dementia, other medical reason) or patient reason(s) for not assessing cognition. Where examples of exceptions are included in the measure language, value sets for these examples are developed and included in the eMeasure. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality |

| | 2872 Dementia- Cognitive Assessment |
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| | improvement.<br>For EHR:<br>HQMF eMeasure developed and is included in this submission. |
| Risk Adjustment | No risk adjustment or risk stratification<br>No risk adjustment or risk stratification |
| Stratification | Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnici |
| Type Score | Rate/proportion  better quality = higher score |
| Algorithm | To calculate performance rates:<br>1. Find the patients who meet the initial population (ie, the general group of patients that a set of performance measures is designed to address).<br>2. From the patients within the initial population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.<br>3. From the patients within the denominator, find the patients who meet the numerator criteria (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator<br>4. From the patients who did not meet the numerator criteria, determine if the provider has documented that the patient meets any criteria for exception when denominator exceptions have been specified for medical reason(s) (eg, patients with very advanced stage dementia, other medical reason), or patient reason(s) for not assessing cognition. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.<br>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. No diagram provided |
| Copyright / Disclaimer | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: |

| | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity |
|---|---|
| Status | Submitted |
| Steward | Centers for Medicare & Medicaid Services (CMS) |
| Description | This stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This is a newly developed measure with a cohort and outcome that is harmonized with the CMS's current publicly reported claims-based stroke mortality measure and includes the National Institutes of Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. This measure uses Medicare fee-for-service (FFS) administrative claims for the cohort derivation, outcome, and risk adjustment. |
| Type | Outcome |
| Data Source | Administrative claims, Other, Electronic Clinical Data : Registry For measure implementation the data sources will be:<br>1. Medicare Part A inpatient and Part B outpatient claims: This data source contains claims data for fee-for service inpatient and outpatient services including: Medicare inpatient hospital care, outpatient hospital services, skilled nursing facility care, some home health agency services, as well as inpatient and outpatient physician claims for the 12 months prior to an index admission.<br>2. Medicare Enrollment Database (EDB): This database contains Medicare beneficiary demographic, benefit/coverage, and vital status information. This data source was used to obtain information on several inclusion/exclusion indicators such as Medicare status on admission, as well as vital status. These data have previously been shown to accurately reflect patient vital status (Fleming et al., 1992).<br>3. For measure development purposes only, we linked the data sources above with data from the AHA/ASA GWTG-Stroke Registry. The registry data were used to obtain the National Institutes of Health (NIH) Stroke Scale scores and clinical risk variables. When this measure is implemented NIH Stroke Scale scores will be derived from ICD-10 codes in Medicare claims.<br>Reference:<br>Fleming C, Fisher ES, Chang CH, Bubolz TA, Malenka DJ. Studying outcomes and hospital utilization in the elderly: The advantages of a merged data base for Medicare and Veterans Affairs hospitals. Medical Care. 1992; 30(5): 377-91. Data sources for the all-payer update<br>No data collection instrument provided Attachment NQF_2876_Claims-Only_Stroke_Mortality_S2b_Mortality_Data_Dictionary_v1.0-635884757617681755.xlsx |
| Level | Facility |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke. |
| Numerator Details | The measure outcome is death from any cause within 30 days of the index admission date. As currently specified, we identify deaths for FFS Medicare patients, age 65 years and older, in the Medicare Enrollment Database (EDB). |
| Denominator Statement | The cohort includes inpatient admissions to all non-federal, short-term, acute care hospitals for Medicare FFS patients age 65 years and older with a principal discharge diagnosis of acute ischemic stroke.<br>Additional details are provided in S.9 Denominat |

| | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity |
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| Denominator Details | The denominator includes all Medicare FFS beneficiaries, age 65 and over, with a principal discharge diagnosis of acute ischemic stroke. To be included in the measure cohort used in public reporting, patients must meet the following additional inclusion criteria:<br>1. Enrolled in Medicare fee-for-service (FFS) during the index admission;<br>2. Not transferred from another acute care facility; and<br>3. Enrolled in Part A and Part B Medicare for the 12 months prior to the date of index admission.<br>ICD-9-CM codes that define the patient cohort:<br>433.01 Occlusion and stenosis of basilar artery with cerebral infarction<br>433.11 Occlusion and stenosis of carotid artery with cerebral infarction<br>433.21 Occlusion and stenosis of vertebral artery with cerebral infarction<br>433.31 Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction<br>433.81 Occlusion and stenosis of other specified precerebral artery with cerebral infarction<br>433.91 Occlusion and stenosis of unspecified precerebral artery with cerebral infarction<br>434.01 Cerebral thrombosis with cerebral infarction<br>434.11 Cerebral embolism with cerebral infarction<br>434.91 Cerebral artery occlusion, unspecified with cerebral infarction<br>436 Acute, but ill-defined, cerebrovascular disease<br>ICD-10 codes that define the patient cohort:<br>I63.22 Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries<br>I63.139 Cerebral infarction due to embolism of unspecified carotid artery<br>I63.239 Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries<br>I63.019 Cerebral infarction due to thrombosis of unspecified vertebral artery<br>I63.119 Cerebral infarction due to embolism of unspecified vertebral artery<br>I63.219 Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries<br>I63.59 Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery<br>I63.20 Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries<br>I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery<br>I63.40 Cerebral infarction due to embolism of unspecified cerebral artery<br>I63.50 Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery<br>I67.8 Other specified cerebrovascular diseases<br>I67.89 Other cerebrovascular diseases<br>An ICD-9 to ICD-10 crosswalk is attached in field S.2b. (Data Dictionary or Code Table). |
| Exclusions | The measure excludes admissions for patients:<br>1. With inconsistent or unknown vital status or other unreliable data;<br>2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and<br>3. Discharged against medical advice (AMA).<br>For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort. |

| | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity |
|---|---|
| Exclusion details | 1. Inconsistent vital status or unreliable data: We do not include stays for patients where the age is greater than 115, where the gender is neither male nor female, where the admission date is after the date of death in the Medicare Enrollment Database, or where the date of death occurs before the date of discharge but the patient was discharged alive.<br>2. Hospice enrollment in the 12 months prior to or on the index admission is identified using hospice data and the Inpatient Standard Analytic File (SAF). These patients are likely continuing to seek comfort measures only; thus, mortality is not necessarily an adverse outcome or signal of poor quality care for these patients.<br>3. Discharges against medical advice (AMA) are identified using the discharge disposition indicator. After all exclusions are applied, the measure randomly selects one index admission per patient per year for inclusion in the cohort so that each episode of care is mutually independent with the same probability of the outcome. For each patient, the probability of death increases with each subsequent admission, and therefore, the episodes of care are not mutually independent. Similarly, for the three year combined data, when index admissions occur during the transition between measure reporting periods (June and July of each year) and both are randomly selected for inclusion in the measure, the measure includes only the June admission. The July admissions are excluded to avoid assigning a single death to two admissions. |
| Risk Adjustment | Statistical risk model<br>Our approach to risk adjustment is tailored to and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, "Standards for Statistical Models Used for Public Reporting of Health Outc<br>Available in attached Excel or csv file at S.2b |
| Stratification | N/A |
| Type Score | Rate/proportion better quality = lower score |
| Algorithm | The measure estimates hospital-level, 30-day, all-cause RSMRs following hospitalization for stroke using hierarchical logistic regression models. In brief, the approach simultaneously models data at the patient and hospital levels to account for variance in patient outcomes within and between hospitals (Normand and Shahian, 2007). At the patient level, it models the log-odds of mortality within 30 days of index admission using age, selected clinical covariates, and a hospital-specific intercept. At the hospital level, it models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then after adjusting for patient risk, the hospital intercepts should be identical across all hospitals.<br>The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths at a given hospital, multiplied by the national observed mortality rate. For each hospital, the numerator of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the denominator is the number of deaths expected based on the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality rates or better quality, and a higher ratio indicates higher-than-expected mortality rates or worse quality.<br>The "predicted" number of deaths (the numerator) is calculated by using the coefficients estimated by regressing the risk factors and the hospital-specific intercept on the risk of |

| | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity |
|---|---|
| | mortality. The estimated hospital-specific intercept is added to the sum of the estimated regression coefficients multiplied by the patient characteristics. The results are transformed and summed over all patients attributed to a hospital to get a predicted value. The "expected" number of deaths (the denominator) is obtained in the same manner, but a common intercept using all hospitals in our sample is added in place of the hospital-specific intercept. The results are transformed and summed over all patients in the hospital to get an expected value. To assess hospital performance for each reporting period, we re-estimate the model coefficients using the years of data in that period.<br>This calculation transforms the ratio of predicted over expected into a rate that is compared to the national observed mortality rate. The hierarchical logistic regression models are described fully in the original methodology report (Grosso et al., 2011).<br>References:<br>Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22(2): 206-226. Available in attached appendix at A.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0467 : Acute Stroke Mortality Rate (IQI 17)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: We did not include in our list of related measures any non-outcome (such as process) measures with the same target population as our measure. Because this is an outcome measure, clinical coherence of the cohort takes precedence over alignment with related non-outcome measures. Furthermore, non-outcome measures are limited due to broader patient exclusions. This is because they typically only include a specific subset of patients who are eligible for that measure (for example, patients who receive a specific medication or undergo a specific procedure). Additionally, this measure and the NQF endorsed Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure #0467 are complementary and related rather than competing measures. Although they both assess mortality for patients admitted to acute care hospitals with a principal discharge diagnosis of acute ischemic stroke, the specified outcomes are different. Our measure assesses 30-day mortality, while #0467 assesses inpatient mortality. The 30-day mortality and inpatient mortality outcomes each have distinct advantages and uses, which make them complementary (and related) as opposed to competing. For example the 30-day period provides a broader perspective on hospital care and utilizes a standard time period to examine hospital performance to avoid bias by differences in length of stay among hospitals. However, in some settings it may not be feasible to capture post-discharge mortality, making the inpatient measure more useable. We have previously consulted with AHRQ to examine harmonization of the measures' cohort. As a result of that collaboration, we have found that the measures' cohorts are harmonized to the extent possible and that the small differences in cohort inclusion and exclusion criteria are appropriate because the measures assess different outcomes.<br><br>5b.1 If competing, why superior or rationale for additive value: This measure looks at a longer outcome time frame (30-days versus in-hospital) and incorporates stroke severity into the risk-model.<br>The current publicly reported measure, Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure, |

| | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|
| Status | Submitted |
| Steward | Centers for Medicare & Medicaid Services (CMS) |
| Description | This hybrid stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This measure is a newly developed measure with a cohort and outcome that is harmonized with the CMS's current publicly reported claims-based stroke mortality measure, and includes the National Institutes of Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. The measure is referred to as a hybrid because it is CMS's intention to calculate the measure using two data sources: Medicare fee-for-service (FFS) administrative claims and clinical electronic health record (EHR) data. |
| Type | Outcome |
| Data Source | Administrative claims, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Laboratory, Other, Electronic Clinical Data : Registry For measure implementation the data sources will be:<br>1. Medicare Part A inpatient and Part B outpatient claims: This data source contains claims data for FFS inpatient and outpatient services including: Medicare inpatient hospital care, outpatient hospital services, skilled nursing facility care, some home health agency services, as well as inpatient and outpatient physician claims for the 12 months prior to an index admission.<br>2. Medicare Enrollment Database (EDB): This database contains Medicare beneficiary demographic, benefit/coverage, and vital status information. This data source was used to obtain information on several inclusion/exclusion indicators such as Medicare status on admission as well as vital status. These data have previously been shown to accurately reflect patient vital status (Fleming et al., 1992).<br>3. Electronic clinical data: The measure will be implemented using electronic clinical data from hospitals' EHRs for risk adjustment. Electronic clinical data includes laboratory results and vital signs at the patient level for all patients included in the cohort.<br><br>Reference:<br>Fleming C, Fisher ES, Chang CH, Bubolz TA, Malenka DJ. Studying outcomes and hospital utilization in the elderly: The advantages of a merged data base for Medicare and Veterans Affairs hospitals. Medical Care. 1992; 30(5): 377-91. Data sources for the all-payer update<br>No data collection instrument provided Attachment NQF_2877_Hybrid_Stroke_Mortality_S2b_Mortality_Data_Dictionary_v1.0.xlsx |
| Level | Facility |
| Setting | Hospital/Acute Care Facility |
| Numerator Statement | The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke. |
| Numerator Details | The measure outcome is death from any cause within 30 days of the admission date of the index admission. As currently specified, we identify deaths for FFS Medicare patients, age 65 years and older in the Medicare Enrollment Database (EDB). |
| Denominator Statement | The cohort includes inpatient admissions for Medicare FFS patients, age 65 years and older, who were discharged from non-federal, short-term, acute care hospitals with a principal discharge diagnosis of acute ischemic stroke. |

| | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|
| | Additional details are provi |
| Denominator Details | The denominator includes all Medicare FFS beneficiaries, age 65 and over with a principal discharge diagnosis of acute ischemic stroke. To be included in the measure cohort used in public reporting, patients must meet the following additional inclusion criteria:<br>1. Enrolled in Medicare fee-for-service (FFS) during the index admission;<br>2. Not transferred from another acute care facility; and<br>3. Enrolled in Part A and Part B Medicare for the 12 months prior to the date of index admission.<br>ICD-9-CM codes that define the patient cohort:<br>433.01 Occlusion and stenosis of basilar artery with cerebral infarction<br>433.11 Occlusion and stenosis of carotid artery with cerebral infarction<br>433.21 Occlusion and stenosis of vertebral artery with cerebral infarction<br>433.31 Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction<br>433.81 Occlusion and stenosis of other specified precerebral artery with cerebral infarction<br>433.91 Occlusion and stenosis of unspecified precerebral artery with cerebral infarction<br>434.01 Cerebral thrombosis with cerebral infarction<br>434.11 Cerebral embolism with cerebral infarction<br>434.91 Cerebral artery occlusion, unspecified with cerebral infarction<br>436 Acute, but ill-defined, cerebrovascular disease<br>ICD-10 codes that define the patient cohort:<br>I63.22 Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries<br>I63.139 Cerebral infarction due to embolism of unspecified carotid artery<br>I63.239 Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries<br>I63.019 Cerebral infarction due to thrombosis of unspecified vertebral artery<br>I63.119 Cerebral infarction due to embolism of unspecified vertebral artery<br>I63.219 Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries<br>I63.59 Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery<br>I63.20 Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries<br>I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery<br>I63.40 Cerebral infarction due to embolism of unspecified cerebral artery<br>I63.50 Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery<br>I67.8 Other specified cerebrovascular diseases<br>An ICD-9 to ICD-10 crosswalk is attached in field S.2b. (Data Dictionary or Code Table). |
| Exclusions | The measure excludes admissions for patients:<br>1. With inconsistent or unknown vital status or other unreliable data;<br>2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and<br>3. Discharged against medical advice (AMA).<br>For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort. |

| | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|
| Exclusion details | 1. Inconsistent vital status or unreliable data: We do not include stays for patients where the age is greater than 115, where the gender is neither male nor female, where the admission date is after the date of death in the Medicare Enrollment Database, or where the date of death occurs before the date of discharge but the patient was discharged alive.<br>2. Hospice enrollment in the 12 months prior to or on the index admission is identified using hospice data and the Inpatient Standard Analytic File (SAF). These patients are likely continuing to seek comfort measures only; thus, mortality is not necessarily an adverse outcome or signal of poor quality care for these patients.<br>3. Discharges against medical advice (AMA) are identified using the discharge disposition indicator. After all exclusions are applied, the measure randomly selects one index admission per patient per year for inclusion in the cohort so that each episode of care is mutually independent with the same probability of the outcome. For each patient, the probability of death increases with each subsequent admission, and therefore, the episodes of care are not mutually independent. Similarly, for the three year combined data, when index admissions occur during the transition between measure reporting periods (June and July of each year) and both are randomly selected for inclusion in the measure, the measure includes only the June admission. The July admissions are excluded to avoid assigning a single death to two admissions. |
| Risk Adjustment | Statistical risk model<br>Our approach to risk adjustment is tailored to and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, "Standards for Statistical Models Used for Public Reporting of Health Outc<br>Available in attached Excel or csv file at S.2b |
| Stratification | N/A |
| Type Score | Rate/proportion better quality = lower score |
| Algorithm | The measure estimates hospital-level, 30-day, all-cause RSMRs following hospitalization for stroke using hierarchical logistic regression models. In brief, the approach simultaneously models data at the patient and hospital levels to account for variance in patient outcomes within and between hospitals (Normand and Shahian, 2007). At the patient level, it models the log-odds of mortality within 30 days of index admission using age, selected clinical covariates, and a hospital-specific intercept. At the hospital level, it models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then after adjusting for patient risk, the hospital intercepts should be identical across all hospitals.<br>The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths at a given hospital, multiplied by the national observed mortality rate. For each hospital, the numerator of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the denominator is the number of deaths expected based on the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality rates or better quality, and a higher ratio indicates higher-than-expected mortality rates or worse quality.<br>The "predicted" number of deaths (the numerator) is calculated by using the coefficients estimated by regressing the risk factors and the hospital-specific intercept on the risk of |

| | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|
| | mortality. The estimated hospital-specific intercept is added to the sum of the estimated regression coefficients multiplied by the patient characteristics. The results are transformed and summed over all patients attributed to a hospital to get a predicted value. The "expected" number of deaths (the denominator) is obtained in the same manner, but a common intercept using all hospitals in our sample is added in place of the hospital-specific intercept. The results are transformed and summed over all patients in the hospital to get an expected value. To assess hospital performance for each reporting period, we re-estimate the model coefficients using the years of data in that period.<br>This calculation transforms the ratio of predicted over expected into a rate that is compared to the national observed mortality rate. The hierarchical logistic regression models are described fully in the original methodology report (Grosso et al., 2011).<br>References:<br>Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22(2): 206-226. Available in attached appendix at A.1 |
| Copyright / Disclaimer | 5.1 Identified measures: 0467 : Acute Stroke Mortality Rate (IQI 17)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: We did not include in our list of related measures any non-outcome (such as process) measures with the same target population as our measure. Because this is an outcome measure, clinical coherence of the cohort takes precedence over alignment with related non-outcome measures. Furthermore, non-outcome measures are limited due to broader patient exclusions. This is because they typically only include a specific subset of patients who are eligible for that measure (for example, patients who receive a specific medication or undergo a specific procedure). Additionally, this measure and the NQF Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure #0467 are complementary and related rather than competing measures. Although they both assess mortality for patients admitted to acute care hospitals with a principal discharge diagnosis of acute ischemic stroke, the specified outcomes are different. Our measure assesses 30-day mortality while #0467 assesses inpatient mortality. The 30-day mortality and inpatient mortality outcomes each have distinct advantages and uses, which make them complementary (and related) as opposed to competing. For example the 30-day period provides a broader perspective on hospital care and utilizes a standard time period to examine hospital performance to avoid bias by differences in length of stay among hospitals. However, in some settings it may not be feasible to capture post-discharge mortality, making the inpatient measure more useable. We have previously consulted with AHRQ to examine harmonization of the measures' cohort. As a result of that collaboration, we have found that the measures' cohorts are harmonized to the extent possible and that the small differences in cohort inclusion and exclusion criteria are appropriate because the measures assess different outcomes. The NQF Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure #0467 is also intended for patients 18 years of age and older, which represents a different cohort than the 65 and older Medicare population for this new hybrid measure.<br><br>5b.1 If competing, why superior or rationale for additive value: This measure looks at a longer outcome time frame (30-days versus in-hospital) and incorporates stroke severity into the risk-model.<br>The current publicly reported measure, Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure, |

## Appendix F: Related and Competing Measures

**Comparison of NQF #2864, #2866 and #2863**

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|---|---|
| Steward | The Joint Commission | The Joint Commission | The Joint Commission |
| Description | Proportion of ischemic stroke patients age 18 years or older for whom an initial NIHSS score is performed prior to any acute recanalization therapy (i.e., intra-venous (IV) thrombolytic (t-PA) therapy, or intra-arterial (IA) thrombolytic (t-PA) therapy, or mechanical endovascular reperfusion (MER) therapy) in patients undergoing recanalization therapy and documented in the medical record, or documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy.<br>This is the first in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-03 Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate); CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as | Proportion of SAH and ICH stroke patients age 18 years or older for whom a severity measurement (i.e., Hunt and Hess Scale for SAH patients or ICH Score for ICH patients) is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention.<br>This is the third measure in a set of measures developed for Joint Commission Comprehensive Stroke Certification. The other measures in the set include CSTK-01 National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients; CSTK-02 Modified Rankin Score (mRS) at 90 Days; CSTK-06 Nimodipine Treatment Administered. Although it is not required that these measures are reported in conjunction with each other, The Joint Commission develops measures in sets in order to provide as comprehensive a view of quality for a particular clinical topic as possible. | Proportion of subarachnoid hemorrhage (SAH) patients age 18 years and older for whom nimodipine treatment was administered within 24 hours of arrival at this hospital. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|---|---|
| | possible. | | |
| Type | Process | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided Attachment Copy_of_AppendixACSTKTables_ICD10codes-635878789321771970.xlsx | Electronic Clinical Data, Paper Medical Records A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided Attachment Copy_of_AppendixACSTKTables_ICD10codes.xlsx | Electronic Clinical Data, Paper Medical Records<br>A web-based data collection tool was developed by The Joint Commission for the pilot test process. Currently, hospitals have the flexibility of creating their own tool modeled after the pilot tool or they may develop their own data collection tools using the data element dictionary and allowable values specified in the implementation guide. Hospitals also have the option of selecting a vendor-developed data collection tool which has been verified by The Joint Commission.<br>No data collection instrument provided |
| Level | Facility, Population : National | Facility, Population : National | Facility, Population : National |
| Setting | Hospital/Acute Care Facility | Hospital/Acute Care Facility | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients for whom an initial NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, OR documented within 12 hours of arrival at the hospital emergency department in patients who do not undergo recanalization therapy. | CSTK-03 The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record; OR documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention. | SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital. |
| Numerator | Nine data elements are used to calculate the | Twelve data elements are used to calculate the | Episode of Care |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|---|---|
| Details | numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>• ICD-10-PCS Other Procedure Code Date – The month, date, and year when the other procedure(s) was performed.<br>• ICD-10-PCS Other Procedure Code Time - The time (military time) when the other procedure(s) was performed.<br>• ICD-10-PCS Principal Procedure Code Date – The month, date, and year when the principal procedure was performed.<br>• ICD-10-PCS Principal Procedure Code Time - The time (military time) when the principal procedure was performed.<br>• Initial NIHSS Score Date – The month, date, and year the NIHSS score was first performed at the hospital.<br>• Initial NIHSS Score Performed – Documentation of the first National Institutes of Health Stroke Scale (NIHSS) score that was done at this hospital. The NIHSS measures several aspects of brain function, including consciousness, vision, sensation, movement, speech, and language. The NIHSS serves several purposes, but its main use in clinical medicine is during the assessment of whether or not the degree of disability caused by a given stroke merits treatment with t-PA. | numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>• ICD-10-PCS Other Procedure Code Date – The month, date, and year when the other procedure(s) was performed.<br>• ICD-10-PCS Other Procedure Code Time - The time (military time) when the other procedure(s) was performed.<br>• ICD-10-PCS Principal Procedure Code Date – The month, date, and year when the principal procedure was performed.<br>• ICD-10-PCS Principal Procedure Code Time - The time (military time) when the principal procedure was performed.<br>• Initial Hunt and Hess Scale Date - The month, date, and year the Hunt and Hess Scale was first performed at the hospital.<br>• Initial Hunt and Hess Scale Performed - Documentation of the first Hunt and Hess Scale that was done at this hospital. The Hunt and Hess Scale is a grading system used to classify the severity of a subarachnoid hemorrhage based on the patient's clinical condition. The scale ranges from a score of 1 to 5. It is used as a predictor of prognosis and outcome with a higher grade correlating to a lower survival rate. Allowable Values: Yes or No/UTD.<br>• Initial Hunt and Hess Scale Time - The time (military time) for which the Hunt and Hess Scale was first documented at the hospital. | Six data elements are used to calculate the numerator. Data elements and definitions:<br>• Arrival Date - The earliest documented month, day, and year, the patient arrived at the hospital.<br><br>• Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br><br>• Nimodipine Administration – Documentation that nimodipine was administered at this hospital. Nimodipine is a cerebroselective calcium channel blocker that inhibits calcium transport into vascular smooth muscle cells, thereby suppressing contractions. Nimodipine is used in the treatment of subarachnoid hemorrhage patients to prevent or limit the severity of cerebral vasospasm. Allowable Values: Yes or No/UTD.<br><br>• Nimodipine Administration Date – The month, day, and year that the first dose of nimodipine was administered to a patient with subarachnoid hemorrhage at this hospital.<br><br>• Nimodipine Administration Time – The time (military time) for which the first dose of nimodipine was administered to |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|---|---|
| | Score documentation my range from 0 to 42. Allowable Values: Yes or No/UTD.<br>• Initial NIHSS Score Time - The time (military time) for which the NIHSS score was first performed at the hospital.<br>Patients are eligible for the numerator population when the ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time minus the Initial NIHSS Score Date and Initial NIHSS Score Time are greater than or equal to zero minutes, OR the Initial NIHSS Score Date and Initial NIHSS Score Time minus the Arrival Date and Arrival Time are greater than or equal to zero minutes and less than or equal to 720 minutes. | • Initial ICH Score Date - The month, date, and year the ICH Score was first performed at the hospital.<br>• Initial ICH Score Performed - Documentation of the first ICH Score that was done at this hospital. The ICH Score is a clinical grading scale composed of factors related to a basic neuorological examination (Glasgow Coma Scale/GCS), a baseline patient characteristic (age), and initial neuroimaging (ICH volume, intraventicular hemorrhage (IVH), infratentorial or supratentorial origin). Score documentation may range from 0 to 6. The purpose of this grading scale is to provide a standard assessment tool that can be easily and rapidly determined at the time of ICH presentation by physicians without special training in stroke neurology and that will allow consistency in communication and treatment selection in clinical care and clinical research. Allowable Values: Yes or No/UTD.<br>• Initial ICH Score Time - The time (military time) for which the ICH score was first documented at the hospital.<br>Patients are eligible for the numerator population when the ICD-10-PCS Principal or Other Procedure Date and ICD-10-PCS Principal or Other Procedure Time minus the Initial Hunt and Hess Scale or ICH Score Date and Initial Hunt and Hess Scale or ICH Score Time are greater than or equal to zero minutes, OR the Initial Hunt and Hess Scale or ICH Score Date and Initial Hunt and Hess Scale or ICH Score Time minus the Arrival Date and Arrival Time are greater than or | a patient with subarachnoid hemorrhage at this hospital.<br><br>• Reason for Not Administering Nimodipine Treatment - Reasons for not administering nimodipine treatment:<br>o Nimodipine allergy<br>o Other reasons documented by physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist Allowable Values: Yes or No/UTD.<br><br>Patients are eligible for the numerator population when the Nimodipine Administration Date and Nimodipine Administration Time minus the Arrival Date and Arrival Time are greater than or equal to zero minutes and less than or equal to 1440 minutes, OR the Reason for Not Administering Nimodipine Treatment equals allowable values 'Yes'. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
|---|---|---|---|
| | | equal to zero minutes and less than or equal to 360 minutes. | |
| Denominator Statement | Ischemic stroke patients who arrive at this hospital emergency department (ED). | SAH and ICH stroke patients who arrive at this hospital emergency department (ED). | SAH patients |
| Denominator Details | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1<br>11 data elements are used to calculate the denominator. Data elements and definitions:<br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br>• Birthdate: The month, day, and year the patient was born.<br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR). Allowable Values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing unclear); 4 (Not documented/UTD).<br>• Direct Admission – Documentation that the patient was transferred from another acute care facility and taken directly to the | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for hemorrhagic stroke as defined in Appendix A, Table 8.2 (i.e., Table 8.2a and Table 8.2b) with or without aneurysm repair procedure (ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2d) or surgical intervention (ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2e)<br>11 data elements are used to calculate the denominator. Data elements and definitions:<br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br>• Birthdate: The month, day, and year the patient was born.<br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR). | Included Populations:<br>• Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.2a<br><br>7 data elements are used to calculate the denominator. Data elements and definitions:<br><br>• Admission Date: The month, day, and year of admission to acute inpatient care.<br><br>• Birthdate: The month, day, and year the patient was born.<br><br>• Clinical Trial: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. Allowable Values: Yes or No/UTD.<br><br>• Comfort Measures Only: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | operating room or interventional suite prior to hospital admission, or admitted directly to intensive care or other unit of the hospital. Allowable Values: Yes or No/UTD.<br>• Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ED Patient - Documentation that the patient received care in a dedicated emergency department of the facility. Allowable Values: Yes or No/UTD.<br>• Elective Carotid Intervention - Documentation demonstrates that the current admission is solely for performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting). Allowable Values: Yes or No/UTD.<br>• ICD-10-PCS Other Procedure Codes: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) codes identifying all significant procedures other than the principal procedure.<br>• ICD-10-CM Principal Diagnosis Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly | Allowable Values: 1 (Day 0 or Day 1); 2 (Day 2 or after); 3 (Timing unclear); 4 Not documented/UTD.<br>• Direct Admission – Documentation that the patient was transferred from another acute care facility and taken directly to the operating room or interventional suite prior to hospital admission, or admitted directly to intensive care or other unit of the hospital. Allowable Values: Yes or No/UTD.<br>• Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ED Patient - Documentation that the patient received care in a dedicated emergency department of the facility.<br>Allowable Values: Yes or No/UTD.<br>• ICD-10-CM Other Diagnosis Code: The other or secondary International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes associated with the diagnosis for this hospitalization.<br>• ICD-10-PCS Other Procedure Codes: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) codes identifying all significant procedures other than the principal procedure.<br>• ICD-10-CM Principal Diagnosis Code: The | support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as “comfort care” by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).<br>Allowable Values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing unclear); 4 (Not documented/UTD).<br>• Discharge Date - The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• Discharge Time – The documented time (military time) the patient was discharged from acute care, left against medical advice or expired during the stay.<br>• ICD-10-CM Principal Diagnosis Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | responsible for occasioning the admission of the patient for this hospitalization.<br>• ICD-10-CM Principal Procedure Code: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. | International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>• ICD-10-PCS Principal Procedure Code: The International Classification of Diseases, Tenth Revision, Master Code Table (ICD-10-PCS) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. | |
| Exclusions | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Patients admitted for Elective Carotid Intervention<br>• Patients who do not undergo recanalization therapy and are discharged within 12 hours of arrival at this hospital | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Non-surgical patients discharged within 6 hours of arrival at this hospital<br>• Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma (ICD-9-CM Other Diagnosis Codes as defined in Appendix A, Table 8.2f) | • Patients less than 18 years of age<br>• Patients who have a Length of Stay greater than 120 days<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival<br>• Patients enrolled in Clinical Trials<br>• Patients discharged within 24 hours of arrival at this hospital |
| Exclusion Details | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay greater | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay greater | • Patients less than 18 years of age.<br>o Patient age (in years) equals Admission Date minus Birthdate.<br>• Patients who have a Length of Stay |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br>• Patients with Comfort Measures Only documented on the day of or day after hospital arrival:<br>o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br>• Patients admitted for Elective Carotid Intervention:<br>o Elective Carotid Intervention includes procedures of the head and neck as defined in Appendix A, Table 8.3 Carotid Intervention Procedures when medical record documentation also states that the reason for the patient's admission to the hospital was for the performance of that procedure and not for the treatment of acute ischemic stroke.<br>o An elective admission is documented as a pre-planned or scheduled admission to the hospital.<br>• Patients who do not undergo recanalization therapy and are discharged within 12 hours of hospital arrival.<br>o Within 12 hours of hospital arrival equals Discharge Date and Discharge Time minus Arrival Date and Arrival Time for patients who do not have an ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, | than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br>• Patients with Comfort Measures Only documented:<br>Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br>• Non-surgical patients discharged within 6 hours of arrival at this hospital.<br>o Within 6 hours of hospital arrival equals Discharge Date and Discharge Time minus Arrival Date and Arrival Time for patients who do not have an ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 8.2d Aneurysm Repair Procedures or Table 8.1e Surgical Intervention Procedures.<br>• Patients with admitting diagnosis of traumatic brain injury (TBI), unruptured arteriovenous malformation (AVM), and non-traumatic subdural hematoma (ICD-10-CM Other Diagnosis Codes as defined in Appendix A, Table 8.2f) | greater than 120 days.<br>o Length of Stay (in days) equals Discharge Date minus Admission Date.<br><br>• Patients with Comfort Measures Only documented:<br>o Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) when the earliest day of documented CMO was on the day of arrival (Day 0) or Day after arrival (Day 1).<br><br>• Patients enrolled in a Clinical Trial.<br>o Patients are excluded if "Yes" is selected for Clinical Trial.<br><br>• Patients who expire within 24 hours of arrival at this hospital<br>o Patients expiration equals Discharge Date and Discharge Time minus Arrival Date and Arrival Time greater than or equal to 0 minutes and less than 1440 minutes |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | Table 8.1a Thrombolytic Agent Procedures or Table 8.1b Mechanical Endovascular Reperfusion Therapy Procedures. | | |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not Applicable | No risk adjustment or risk stratification<br>Not Applicable | No risk adjustment or risk stratification<br>Not Applicable |
| Stratification | Not Applicable | The CSTK-03 measure is reported as an overall rate which includes SAH and ICH stoke patients for whom a severity measurement is performed prior to surgical intervention (e.g., clipping, coiling, or any surgical intervention) in patients undergoing surgical intervention and documented in the medical record; OR, documented within 6 hours of arrival at the hospital emergency department in patients who do not undergo surgical intervention. CSTK-03a and CSTK-03b are submeasures of the overall rate measure, and stratified by the type of stroke patient as defined by the ICD-10-CM Principal Diagnosis Code in Appendix A, Table 8.2 (i.e., Table 8.2a and Table 8.2b) | Not Applicable |
| Type Score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion<br>better quality = higher score |
| Algorithm | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag.<br>1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag.<br>1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have successfully | Comprehensive Stroke (CSTK) Initial Patient Population Algorithm<br>Variable Key: Patient Age, Initial Patient Population Reject Case Flag, Length of Stay, Sub-Population 1 Flag, Sub-Population 2 Flag, and Sub-Population 3 Flag. |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br>4. Check Patient Age<br>a. If the Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Patient Age is greater than or equal | reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br>4. Check Patient Age<br>a. If Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If Patient Age is greater than or equal to 18 years, continue processing and proceed to | 1. Start CSTK Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.<br><br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1 and 8.2, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1 or 8.2, continue processing and proceed to the Patient Age calculation.<br><br>3. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age.<br><br>4. Check Patient Age |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | to 18 years, continue processing and proceed to Length of Stay Calculation.<br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay<br>a. If the Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br>7. Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM Principal Diagnosis Code to determine the CSTK sub-population.<br>8. Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section. | Length of Stay Calculation.<br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay<br>a. If Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br>7. Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM Principal Diagnosis Code to determine the CSTK sub-population.<br>8. Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes. | a. If the Patient Age is less than 18 years, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Patient Age is greater than or equal to 18 years, continue processing and proceed to Length of Stay Calculation.<br><br>5. Calculate the Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br><br>6. Check Length of Stay<br>a. If the Length of Stay is greater than 120 days, the patient is not in the CSTK Initial Patient Population and is not eligible to be sampled for the CSTK measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the Length of Stay is less than or equal to 120 days, the patient is in the CSTK Initial Patient Population.<br><br>7. Set the Initial Patient Population Reject Case Flag to equal No. Continue processing and proceed to the ICD-10-CM |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | b. If the ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD-10-PCS Principal Or Other Procedure Codes.<br>i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal Or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients<br>Numerator: Ischemic stroke patients for whom a NIHSS score is performed prior to any acute recanalization therapy in patients undergoing recanalization therapy and documented in the medical record, OR documented within 12 hours of hospital arrival for patients who do not undergo recanalization therapy.<br>Denominator: Ischemic stroke patients who arrive at this hospital emergency department | i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>CSTK-03: Severity Measurement Performed for SAH and ICH Patients (Overall Rate)<br>Numerator: The number of SAH and ICH stroke patients for whom a severity measurement is performed prior to surgical intervention in patients undergoing surgical intervention and documented in the medical record, OR documented within 6 hours of hospital arrival for patients who do not undergo surgical intervention.<br>Denominator: SAH and ICH stroke patients who arrive at this hospital emergency department (ED)<br>Variable Key: Timing I, Timing II, Timing III, Timing IV, Timing V<br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical | Principal Diagnosis Code to determine the CSTK sub-population.<br><br>8. Initialize Sub-Population 1 Flag, Sub-Population 2 Flag and Sub-Population 3 Flag to No.<br><br>9. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is on 8.2, the patient is in the CSTK Sub-Population 3 and is eligible to be sampled for the CSTK Sub-Population 3. Set Sub-Population 3 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>b. If the ICD-10-CM Principal Diagnosis Code is on 8.1, continue processing and proceed to ICD-10-PCS Principal Or Other Procedure Codes.<br>i. If at least one ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 2 and is eligible to be sampled for the CSTK Sub-Population 2. Set Sub-Population 2 Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.<br>ii. If none of the ICD-10-PCS Principal Or Other Procedure Codes are on Table 8.1a or 8.1b, the patient is in the CSTK Sub-Population 1 and is eligible to be sampled for the CSTK Sub-Population 1. Set Sub-Population 1 Flag to Yes. Return to |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | (ED)<br>Variable Key: Timing I, Timing II, Timing III<br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to ED Patient.<br>3. Check ED patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ED Patient equals No, continue processing and proceed to step 4 to check Direct Admission.<br>c. If ED Patient equals Yes, continue processing and proceed to step 5 to check Comfort Measures Only.<br>4. Check Direct Admission<br>a. If Direct Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Direct Admission equals No, the case will proceed to a Measure Category Assignment | through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.2, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.2, continue processing and proceed to ICD-10-PCS Other Diagnosis Code.<br>3. Check ICD-10-PCS Other Diagnosis Code<br>a. If ICD-10-PCS Other Diagnosis Code is on Table 8.2f, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Other Diagnosis Code is not on Table 8.2f or all missing, continue processing and proceed to ED Patient.<br>4. Check ED patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ED Patient equals No, continue processing and proceed to Step 5 to check direct admission. | Transmission Data Processing Flow: Clinical in the Data Transmission section.<br><br>CSTK-06: Nimodipine Treatment Administered<br><br>Numerator: SAH patients for whom nimodipine treatment was administered within 24 hours of arrival at this hospital.<br><br>Denominator: SAH patients<br><br>Variable Key: Timing I, Timing II<br>1. Start processing. Run cases that are included in the Comprehensive Stroke (CSTK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br><br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If ICD-10-CM Principal Diagnosis Code is not on Table 8.2a, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If ICD-10-CM Principal Diagnosis Code is on Table 8.2a, continue processing and proceed to Comfort Measures Only.<br><br>3. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | of B and will not be in the measure population. Stop processing.<br>c. If Direct Admission equals Yes, continue processing and proceed to Comfort Measures Only.<br>5. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Elective Carotid Intervention.<br>6. Check Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Initial NIHSS Score Performed.<br>7. Check Initial NIHSS Score Performed<br>a. If Initial NIHSS Score Performed is missing, the case will proceed to a Measure Category | c. If ED Patient equals Yes, continue processing and proceed to Step 6 to check Comfort Measures Only.<br>5. Check Direct Admission<br>a. If Direct Admission is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Direct Admission equals No, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Direct Admission equals Yes, continue processing and proceed to Comfort Measures Only.<br>6. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B for Overall Rate CSTK-03 and will not be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure | the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br><br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Arrival Date.<br><br>5. Check Arrival Date<br>a. If Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Date equals a Non-Unable to |

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| | Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Performed equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Initial NIHSS Score Performed equals Yes, continue processing and proceed to Initial NIHSS Score Date.<br>8. Check Initial NIHSS Score Date<br>a. If Initial NIHSS Score Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Initial NIHSS Score Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Initial NIHSS Score Time.<br>9. Check Initial NIHSS Score Time<br>a. If Initial NIHSS Score Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Initial NIHSS Score Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. | Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to check ICD-10-CM Principal or Other Procedure Codes.<br>7. Check ICD-10-PCS Principal or Other Procedure Codes<br>a. If all missing or none ICD-10-PCS Principal or Other Procedure Codes is on Table 8.2d or 8.2e, continue processing and proceed to Step 20 to check Discharge Date.<br>b. If any ICD-10-PCS Principal or Other Procedure Codes is on Table 8.2d or 8.2e, continue processing and proceed to Initial Hunt and Hess Scale Performed.<br>8. Check Initial Hunt and Hess Scale Performed<br>a. If Initial Hunt and Hess Scale Performed is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Performed equals No, continue processing and proceed to step 14 to check Initial ICH Score Performed.<br>c. If Initial Hunt and Hess Scale Performed equals Yes, continue processing and proceed to check Initial Hunt and Hess Scale Date.<br>9. Check Initial Hunt and Hess Scale Date<br>a. If Initial Hunt and Hess Scale Date is missing, the case will proceed to a Measure Category | be Determined (non-UTD), continue processing and proceed to Arrival Time.<br><br>6. Check Arrival Time<br>a. If Arrival Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Discharge Date.<br><br>7. Check Discharge Date<br>a. If Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Discharge Time.<br><br>8. Check Discharge Time |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | c. If Initial NIHSS Score Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes.<br>10. Check ICD-10-PCS Principal or Other Procedure Codes<br>a. If all missing or none ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, continue processing and proceed to step 14 and check Discharge Date.<br>b. If any ICD-10-PCS Principal or Other Procedure Codes is on Table 8.1a or 8.1b, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Code Date.<br>11. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure Code Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to ICD-10-PCS Principal or Other Procedure Code Time.<br>12. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure | Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial Hunt and Hess Scale Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Initial Hunt and Hess Scale Time.<br>10. Check Initial Hunt and Hess Scale Time<br>a. If Initial Hunt and Hess Scale Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial Hunt and Hess Scale Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b. | a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br><br>9. Calculate Timing I. Timing I, in minutes, is equal to the Discharge Date and the Discharge Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is greater than or equal to zero and less than 1440, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>b. If the time in minutes is greater than or equal to 1440, the case will proceed to Nimodipine Administration.<br><br>10. Check Nimodipine Administration<br>a. If Nimodipine Administration is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration equals No, continue processing and proceed to |

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| | Code Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br>13. Calculate Timing I. Timing I, in minutes, is equal to ICD-10-PCS Principal or Other Procedure Code Date and ICD-10-PCS Principal or Other Procedure Code Time minus the Initial NIHSS Score Date and Initial NIHSS Score Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing.<br>14. Check Discharge Date<br>a. If Discharge Date is missing, the case will | c. If Initial Hunt and Hess Scale Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Date.<br>11. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure Code Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Time.<br>12. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure Code Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize | step 14 and check Reason for Not Administering Nimodipine Treatment.<br>c. If Nimodipine Administration equals Yes, continue processing and proceed to Nimodipine Administration Date.<br><br>11. Check Nimodipine Administration Date<br>a. If Nimodipine Administration Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Nimodipine Administration Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Nimodipine Administration Time.<br><br>12. Check Nimodipine Administration Time<br>a. If Nimodipine Administration Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Nimodipine Administration Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. |

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| | proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Discharge Time.<br>15. Check Discharge Time<br>a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to Arrival Date.<br>16. Check Arrival Date<br>a. If Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Date equals a Non-Unable to be Determined (non-UTD), continue processing | Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing I calculation.<br>13. Calculate Timing I. Timing I, in minutes, is equal to the ICD-10-PCS Principal or Other Procedure Code Date and the ICD-10-PCS Principal or Other Procedure Code Time minus the Initial Hunt and Hess Scale Date and Initial Hunt and Hess Scale Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b. | c. If Nimodipine Administration Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation.<br><br>13. Calculate Timing II. Timing II, in minutes, is equal to the Nimodipine Administration Date and the Nimodipine Administration Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is greater than 1440, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 1440, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing.<br><br>14. Check Reason for Not Administering Nimodipine Treatment<br>a. If Reason for Not Administering Nimodipine Treatment is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Administering Nimodipine Treatment equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. |

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| | and proceed to Arrival Time.<br>17. Check Arrival Time<br>a. If Arrival Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If Arrival Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation.<br>18. Calculate Timing II. Timing II, in minutes, is equal to the Discharge Date and the Discharge Time minus the Arrival Date and Arrival Time.<br>a. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than 720, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to 720, continue processing and proceed to the Timing III calculation.<br>19. Calculate Timing III. Timing III, in minutes, is equal to the Initial NIHSS Score Date and the Initial NIHSS Score Time minus the Arrival Date and Arrival Time. | c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E for Overall Rate CSTK-03 and will be in the numerator population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>14. Check Initial ICH Score Performed<br>a. If Initial ICH Score Performed is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Performed equals No, the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Performed equals Yes, continue processing and proceed to check Initial ICH Score Date.<br>15. Check Initial ICH Score Date<br>a. If Initial ICH Score Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Date equals Unable to | c. If Reason for Not Administering Nimodipine Treatment equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing.<br>Available at measure-specific web page URL identified in S.1 |

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| | a. If the time in minutes less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the time in minutes is greater than 720, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.<br>c. If the time in minutes is greater than or equal to zero and less than or equal to 720, the case will proceed to a Measure Category Assignment of E and will be in the numerator population. Stop processing. Available at measure-specific web page URL identified in S.1 | Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Initial ICH Score Time.<br>16. Check Initial ICH Score Time<br>a. If Initial ICH Score Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Initial ICH Score Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Initial ICH Score Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Date.<br>17. Check ICD-10-PCS Principal or Other Procedure Code Date<br>a. If ICD-10-PCS Principal or Other Procedure | |

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| | | Code Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Code Time.<br>18. Check ICD-10-PCS Principal or Other Procedure Code Time<br>a. If ICD-10-PCS Principal or Other Procedure Code Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If ICD-10-PCS Principal or Other Procedure Code Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue | |

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| | | processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If ICD-10-PCS Principal or Other Procedure Code Time equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to the Timing II calculation.<br>19. Calculate Timing II. Timing II, in minutes, is equal to the ICD-10-PCS Principal or Other Procedure Code Date and the ICD-10-PCS Principal or Other Procedure Code Time minus the Initial ICH Score Date and Initial ICH Score Time.<br>a. If the time in minutes is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If the time in minutes is greater than or equal to zero, the case will proceed to a Measure Category Assignment of E for overall rate CSTK-03 and will be in the numerator population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b. | |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | | 20. Check Discharge Date<br>a. If Discharge Date is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Discharge Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Discharge Date equals a Non-Unable to be Determined (non-UTD), continue processing and proceed to check Discharge Time.<br>21. Check Discharge Time<br>a. If Discharge Time is missing, the case will proceed to a Measure Category Assignment of X for Overall Rate CSTK-03 and will be rejected. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>b. If Discharge Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D for Overall Rate CSTK-03 and will be in the measure population. Continue processing and proceed to Step 33 to Initialize Measure Category Assignment for strata measure CSTK-03a and CSTK-03b.<br>c. If Discharge Time equals a Non-Unable to be Determined (non-UTD), continue processing and | |

| | 2864 CSTK-01: National Institutes of Health Stroke Scale (NIHSS) Score Performed for Ischemic Stroke Patients | 2866 CSTK-03: Severity Measurement Performed for Subarachnoid Hemorrhage (SAH) and Intracerebral Hemorrhage (ICH) Patients (Overall Rate) | 2863 CSTK-06: Nimodipine Treatment Administered |
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| | | proceed to check Arrival Date.<br>Continued in Section Ad.8 Additional Information/Comments. Available at measure-specific web page URL identified in S.1 | |
| Submission items | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Not applicable<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable | |

**Comparison of NQF #0437, #0661, #1952, and #0288**

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| Steward | The Joint Commission | Centers for Medicare & Medicaid Services | American Heart Association/American Stroke Association |
| Description | This measure captures the proportion of acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous | This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the emergency department (ED) within two hours of the onset of symptoms and have a head computed tomography (CT) or magnetic resonance imaging (MRI) scan interpreted within 45 minutes of ED arrival. The measure is calculated using chart-abstracted data, on a rolling, | Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. | quarterly basis and is publicly reported, in aggregate, for one calendar year. The measure has been publicly reported, annually, by CMS as a component of its Hospital Outpatient Quality Reporting (HOQR) Program since 2012. | |
| Type | Process | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635876964272987900.xls | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records An electronic data collection tool is made available from vendors or facilities can download the free CMS Abstraction & Reporting Tool (CART). Paper tools for manual abstraction, which are posted on www.QualityNet.org, are also available for the CART tool. These tools are posted on www.QualityNet.org.<br>Available at measure-specific web page URL identified in S.1 Attachment NQF_0661_Measure_Code_Set.xlsx | Electronic Clinical Data : Registry Get with the Guidelines Stroke Data Collection Form. This is a paper version of the electronic data collection tool which is called the Patient Management Tool (PMT).<br>Available in attached appendix at A.1 Attachment Time_to_Thrombolytic_Data_Dictionary.xlsx |
| Level | Facility, Population : National | Facility, Population : National | Facility |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| Setting | Hospital/Acute Care Facility | Emergency Medical Services/Ambulance, Hospital/Acute Care Facility | Hospital/Acute Care Facility |
| Numerator Statement | Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well. | The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan interpreted within 45 minutes of ED arrival. | Acute ischemic stroke patients aged 18 years and older receiving intravenous tissue plasminogen activator (tPA) therapy during the hospital stay and having a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. |
| Numerator Details | Five data elements are used to calculate the numerator:<br>• Date Last Known Well – The month, date, and year prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>• Time Last Known Well – The time (military time) prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>• IV Thrombolytic Initiation – Documentation that intravenous (IV) thrombolytic therapy (t-PA) was initiated at this hospital.<br>Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>• IV Thrombolytic Initiation Date – The month, date, and year the IV thrombolytic therapy was initiated to a | The numerator is defined by six evaluation and management (E/M) codes and 102 ICD-10-CM diagnosis codes included in the code set for this measure; these detailed lists can be found in the Excel workbook provided for Section S2b.<br>The numerator includes patients age 18 or older who were last known well within two hours of ED arrival and had a head CT or MRI ordered and interpreted within 45 minutes of ED arrival. Numerator exceptions include:<br>• Date Last Known Well is equal to UTD<br>• Time Last Known Well is equal to UTD<br>• Arrival Time is equal to UTD<br>• Head CT Scan or MRI Interpretation Date is equal to UTD<br>• Head CT Scan or MRI Interpretation Date is equal to UTD | All denominator patients with the following:<br>['Date/time IV thrombolytic therapy initiated' minus 'Arrival Date/Time'] <= 60 minutes<br><br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | patient with ischemic stroke at this hospital.<br>• IV Thrombolytic Initiation Time - The time (military time) for which IV thrombolytic therapy was initiated to a patient with ischemic stroke at this hospital.<br>Patients are eligible for the numerator population when the IV Thrombolytic Initiation Date and IV Thrombolytic Initiation Time minus Date Last Known Well and Time Last Known Well >/= 0 minutes and </= 180 minutes. | | |
| Denominator Statement | Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well. | The number of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI scan ordered. | All acute ischemic stroke patients who received intravenous thrombolytic therapy during the hospital stay. |
| Denominator Details | Fourteen data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Arrival Date – The earliest documented month, day, and year, the patient arrived at the hospital.<br>3. Arrival Time - The earliest documented time (military time) the patient arrived at the hospital.<br>4. Birthdate - The month, day and year the patient was born. | The denominator is defined by six evaluation and management (E/M) codes and 104 ICD-10-CM diagnosis codes included in the code set for this measure; these detailed lists can be found in the Excel workbook provided for Section S2b.<br>The denominator includes patients age 18 or older who were last known well within two hours of ED arrival and had a head CT or MRI ordered. | An ICD-9-CM/ICD-10 Principal Diagnosis Code for acute ischemic stroke:<br>Diagnosis for ischemic stroke ICD-9: 433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.11, 434.91, 436<br>Diagnosis for ischemic stroke ICD-10: ICD-10: I63.00, I63.011, I63.012, 163.019, I63.02, I63.031, I63.032, I63.039, I63.09, I63.10, I63.111, I63.112, I63.119, I63.12, I63.131, I63.132, I63.139, I63.19, I63.20, I63.211, I63.212, I63.219, I63.22, I63.231, I63.232, I63.239, I63.29, I63.30, I63.311, I63.312, I63.319, I63.321, I63.322, I63.329, I63.331, I63.332, I63.339, I63.341, I63.342, I63.349, I63.39, I63.40, I63.411, I63.412, I63.419, I63.421, I63.422, I63.429, I63.431, |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | 5. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>6. Date Last Known Well – The month, date, and year prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>7. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>8. ED Patient – Documentation that the patient received care in a dedicated emergency department of the facility.<br>Allowable values: Yes or No/UTD.<br>9. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis | | I63.432, I63.439, I63.441, I63.442, I63.449, I63.49, I63.50, I63.511, I63.512, I63.519, I63.521, I63.522, I63.529, I63.531, I63.532, I63.539, I63.541, I63.542, I63.549, I63.59, I63.6, I63.8, I63.9<br>OR:<br>'Final clinical diagnosis related to stroke' = Ischemic Stroke<br>AND:<br>'IV tPA initiated at this hospital' = YES*<br>*Thrombolytic therapy for stroke includes: Activase, Alteplase, IV t-PA, or Recombinant t-PA Tissue plasminogen activator.<br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>11. Last Known Well – Documentation of the date and time prior to hospital arrival at which it was witnessed or reported that the patient was last known to be without the signs or symptoms of the current stroke or at his or her baseline state of health.<br>Allowable values: Yes or No/UTD.<br>12. Reason for Extending the Initiation of IV Thrombolytic – Physician/APN/PA or pharmacist documentation of a reason for extending the initiation of IV thrombolytic.<br>Allowable values: Yes or No/UTD.<br>13. Reason For Not Initiating IV Thrombolytic – Physician/APN/PA or pharmacist documentation of a reason for not initiating IV thrombolytic.<br>Allowable values: Yes or No/UTD.<br>14. Time Last Known Well – The time (military time) prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table | | |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | 8.1. | | |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Time last known well to arrival in the emergency department greater than 2 hours<br>• Documented reason for extending the initiation of IV thrombolytic<br>• Documented reason for not initiating IV thrombolytic | Studies are excluded for any patients under 18 years of age, patients who expired in the ED, or patients who left the ED against medical advice or discontinued care. Additionally, patients who do not arrive to the ED within two hours of symptom onset or who do not have a head CT or MRI scan ordered are excluded from the target population. | Denominator Exclusions:<br>•Patients less than 18 years of age<br>•Patient stroke occurred while in hospital<br>•Patients received in transfer from the inpatient, or outpatient of another facility<br>•Patients that receive tPA greater than 4.5 hours after Last Known Well<br>•Clinical trial<br>Denominator Exceptions:<br>Patients with documented Eligibility or Medical reason for delay in treatment [eg, social, religious, initial refusal, hypertension requiring aggressive control with intravenous medications, inability to confirm patients eligibility, or further diagnostic evaluation to confirm stroke for patients with hypoglycemia (blood glucose < 50); seizures, or major metabolic disorders, or management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure requiring intubation), or investigational or experimental protocol for thrombolysis.] |
| Exclusion Details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial. | Studies are excluded for any patients that meet any of the following criteria:<br>• Patients less than 18 years of age<br>• Patients who expired (discharge code = 6)<br>• Patients who left the emergency department against medical advice or discontinued care (discharge code = 7 or 8) | The AHA/ASA distinguishes between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For measure |

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| | • Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients with time last known well to arrival in the emergency department greater than 2 hours are excluded.<br>• Patients are excluded if “Yes” is selected for Reason for Extending the Initiation of IV Thrombolytic.<br>• Patients are excluded if "Yes" is selected for Reason For Not Initiating IV Thrombolytic. | • Patients who have a head CT or MRI scan order equal to “No”<br>• Patients who have a Last Known Well field equal to “No” | 1952, Time to Intravenous Thrombolytic Therapy, exclusions include patients who are less than 18 years of age, patients whose stroke occurred while in the hospital, patients that received in transfer from the inpatient or outpatient of another facility, patients that receive tPA greater than 4.5 hours after Last Known Well, and patients enrolled in clinical trials. Exclusions are included in the measure specifications.<br>Measure Exceptions<br>Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure 1952, Time to Intravenous Thrombolytic Therapy exceptions may include medical reason(s) [eg, hypertension requiring aggressive control with intravenous medications, inability to confirm patient eligibility, or further diagnostic evaluation needed to confirm stroke for patients with hypoglycemia (blood glucose <50); seizures, major metabolic disorders, or management of concomitant emergent/acute conditions such as |

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| | | | cardiopulmonary arrest, respiratory failure requiring intubation], or investigational or experimental protocol for thrombolysis, or eligibility reason(s) (eg, social, religious, initial refusal). Although this methodology does not require the external reporting of more detailed exception data, the AHA/ASA recommends that facilities document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The AHA/ASA also advocates the systematic review and analysis of each facility's exceptions data to identify practice patterns and opportunities for quality improvement.<br>Additional details are as follows:<br>Measure Exclusions:<br>'Age' < 18 years<br>OR<br>['Date/time IV thrombolytic therapy initiated' minus 'Date/time Last Known Well'] > 4.5 hours<br>OR<br>'Patient location when stroke symptoms discovered' = stroke occurred after hospital 'Arrival Date/Time'<br>OR<br>'How patient arrived at your hospital' = transfer from other hospital<br>OR<br>'Was patient enrolled in a clinical trial in which patients with the same condition as the measure set were being studied' = yes<br>OR<br>If any of the following is unknown, blank, or |

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| | | | incomplete (aka, missing time): 'Arrival Date/Time', 'Date/time IV thrombolytic therapy initiated', 'Date/time Last Known Well'<br>Measure Exceptions:<br>['Date/time IV thrombolytic therapy initiated' minus 'Arrival Date/Time'] > 60 minutes<br>AND<br>Eligibility Reason OR Medical Reason = Present<br>**Data elements referenced align with information found in S.19 'Time to Intravenous Thrombolytic Therapy Specifications.docx' attachment. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification<br>Not applicable; this measure does not risk adjust.<br>Provided in response box S.15a | No risk adjustment or risk stratification<br>No risk adjustment or risk stratification |
| Stratification | Not applicable, the measure is not stratified. | Not applicable; this measure does not stratify its results. | Consistent with CMS' Measures Management System Blueprint and recent national recommendations put forth by the IOM and NQF to standardize the collection of race and ethnicity data, we encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and payer |
| Type Score | Rate/proportion better quality = higher score | Other (specify): Percentage better quality = higher score | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code | This measure calculates the percentage of acute ischemic stroke or hemorrhagic stroke patients who arrive at the ED within two hours of the onset of symptoms and have a head CT or MRI interpreted within 45 minutes of ED arrival. The measure is calculated based on four consecutive quarters of hospital | Rate is determined by calculating those eligible patients meeting the numerator specification divided by those meeting the denominator specification.<br>1) Check to see if there is an ICD-9/ICD-10 principal diagnosis of ischemic stroke; exclude those patients without an appropriate diagnosis code.<br>2) Check to see if patient had an inpatient stroke; |

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| | a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to ED Patient.<br>3. Check ED Patient<br>a. If ED Patient is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ED Patient equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If ED Patient equals Yes, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention. | outpatient claims data, as follows:<br>1. Check E/M Code; if on Table 1.0 (in the Excel workbook provided for Section S2b), proceed<br>2. Calculate Patient Age (Outpatient Encounter Date - Birthdate)<br>3. Check Patient Age; if >= 18, proceed<br>4. Check ICD-10-CM Principal Diagnosis Code; if on Table 8.0 (in the Excel workbook provided for Section S2b), proceed<br>5. Check Discharge Code; exclude any patients with code 6, 7, or 8<br>6. Check Head CT or MRI Scan Order; if "Yes," proceed<br>7. Check Last Known Well; if "Yes," proceed<br>8. Check Date Last Known Well; if a Non-Unable to Determine (UTD) value, proceed<br>9. Check Time Last Known Well; if a Non-UTD value, proceed<br>10. Check Arrival Time; if a Non-UTD value, proceed<br>11. Calculate measurement value (Arrival Time minus Time Last Known Well)<br>12. Check measurement value; if >= 0 min and <= 120 min, record as the denominator and proceed<br>13. Check Head CT or MRI Scan Interpretation Date; if a Non-Unable to | exclude those patients with inpatient stroke<br>3) Check to see if patient is 18 years or older; exclude those patients less than 18 years of age<br>4) Check to see if patient is in a clinical trial; exclude those patients who were in a clinical trial<br>5) Check to see patient arrival date is documented; exclude those patients for which arrival date is unable to be determined (blank/unknown)<br>6) Check to see if patient arrival time is documented; exclude those patients for which arrival time is unable to be determined (blank/unknown)<br>7) Check to see if patient was transferred from another hospital; exclude those patients who were transferred from another hospital<br>8) Check to see if patient had IV thrombolytic therapy initiated; exclude those patients for whom IV thrombolytic therapy was not initiated<br>9) Check thrombolytic initiation date; exclude those patient for which thrombolytic initiation date is unable to be determined (blank/unknown)<br>10) Check thrombolytic initiation time; exclude those patients for which thrombolytic initiation time is unable to be determined (blank/unknown)<br>11) IV Thrombolytic Initiation Date/Time should not be less than (aka, should not be documented as occurring prior to) hospital arrival date/time; exclude those patients for whom arrival IV thrombolytic initiation date/time is less than hospital arrival date/time<br>12) Check to see date/time last known well; exclude patients for whom date/time last known well is |

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| | 5. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Arrival Date.<br>6. Check Arrival Date<br>a. If the Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Date equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Arrival Time.<br>7. Check Arrival Time only if the Arrival Date is a Non Unable to Determine (non-UTD) Value<br>a. If the Arrival Time is missing, the case | Determine (UTD) value, proceed<br>14. Check Head CT or MRI Scan Interpretation Time; if a Non-Unable to Determine (UTD) value, proceed<br>15. Calculate measurement value (Arrival Time minus Head CT or MRI Scan Interpretation Time)<br>16. Check measurement value; if >= 0 min and <= 45 min, record as the numerator<br>17. Aggregate denominator and numerator counts by Medicare provider number<br>18. Measure = numerator counts / denominator counts [The value should be recorded as a percentage] No diagram provided | unable to be determined (blank/unknown)<br>13) Check to see timing in hours. Timing (IV Thrombolytic Initiation Date/Time - Date/Time Last Known well) should be less than or equal to 4.5 hours. If greater than 4.5 hours exclude patients.<br>14) If timing is less than or equal to 4.5 hours, check to see if timing for IV thrombolytic therapy time (IV Thrombolytic Initiation Date/Time - Arrival Date/Time) is less than or equal to 60 minutes. If time was greater than 60 minutes, determine if patient had a valid documented exception/reason for delay.<br>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.<br>For detailed measure algorithm see attached. Available in attached appendix at A.1 |

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| | will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Time equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Time equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Last Known Well.<br>8. Check Last Known Well<br>a. If Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Last Known Well equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Last Known Well equals Yes, continue processing and proceed to Date Last Known Well.<br>9. Check Date Last Known Well<br>a. If the Date Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Date Last Known Well equals Unable to Determine (UTD), the case will proceed to a Measure Category | | |

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| | Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Date Last Known Well equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Time Last Known Well.<br>10. Check Time Last Known Well only if the Date Last Known Well is a Non Unable to Determine (non-UTD) Value<br>a. If the Time Last Known Well is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Time Last Known Well equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Time Last Known Well equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to the Timing I calculation.<br>11. Calculate Timing I only if the Time Last Known Well is a Non Unable to Determine (non-UTD) Value. Timing I, in minutes, is equal to the Arrival Date and the Arrival Time minus the Date Last Known Well and the Time Last Known Well. Calculate Timing I for each case that has a Non Unable to Determine (non-UTD) date and time combination.<br>a. If the time in minutes is greater than | | |

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| | 120, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 120, continue processing and proceed to IV Thrombolytic Initiation.<br>12. Check IV Thrombolytic Initiation<br>a. If IV Thrombolytic Initiation is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If IV Thrombolytic Initiation equals No, continue processing and proceed to Reason for Not Initiating IV Thrombolytic.<br>c. If IV Thrombolytic Initiation equals Yes, continue processing and check IV Thrombolytic Initiation Date.<br>13. Check Reason for Not Initiating IV Thrombolytic<br>a. If Reason for Not Initiating IV Thrombolytic is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Initiating IV Thrombolytic equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. | | |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | c. If Reason for Not Initiating IV Thrombolytic equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>14. Check IV Thrombolytic Initiation Date<br>a. If the IV Thrombolytic Initiation Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the IV Thrombolytic Initiation Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the IV Thrombolytic Initiation Date equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to IV Thrombolytic Initiation Time.<br>15. Check IV Thrombolytic Initiation Time only if the IV Thrombolytic Initiation Date is a Non Unable to Determine (non-UTD) Value<br>a. If the IV Thrombolytic Initiation Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the IV Thrombolytic Initiation Time equals Unable to Determine (UTD), the case will proceed to a Measure Category | | |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the IV Thrombolytic Initiation Time equals a Non Unable To Determine (non-UTD) Value, continue processing and proceed to the Timing II calculation.<br>16. Calculate Timing II. Timing II, in minutes, is equal to the IV Thrombolytic Initiation Date and the IV Thrombolytic Initiation Time minus the Date Last Known Well and the Time Last Known Well. a. If the time in minutes is greater than 270, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>b. If the time in minutes is greater than or equal to zero and less than or equal to 270, continue processing and proceed to recheck Timing II.<br>c. If the time in minutes is less than zero, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>17. Recheck Timing II a. If the time in minutes is greater than or equal to zero and less than or equal to 180, the case will proceed to a Measure category Assignment of E and will be in the Numerator Population. Stop processing.<br>b. If the time in minutes is greater than 180 and less than or equal to 270, | | |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
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| | continue processing and proceed to Reason for Extending the Initiation of IV Thrombolytic.<br>18. Check Reason for Extending the Initiation of IV Thrombolytic a. If Reason for Extending the Initiation of IV Thrombolytic is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Extending the Initiation of IV Thrombolytic equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Extending the Initiation of IV Thrombolytic equals No, the case will proceed to a Measure Category Assignment D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 | | |
| Submission items | 5.1 Identified measures: 0288 : Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival<br>0242 : Stroke and Stroke Rehabilitation: Tissue Plasminogen Activator (t-PA) Considered<br>0164 : Fibrinolytic Therapy received within 30 minutes of hospital arrival<br>1952 : Time to Intravenous Thrombolytic Therapy | 5.1 Identified measures: 0437 : STK 04: Thrombolytic Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Although NQF #0437 (used in the Hospital Inpatient Quality Reporting [HIQR] | 5.1 Identified measures: 0437 : STK 04: Thrombolytic Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measure #1952 assesses of the patients who received tPA within 4.5 hours, the percentage of patients who received tPA within the optimal time window of = 60 minutes. This |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|---|---|
| | 5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0288 and 0164 are AMI (Acute Myocardial Infarction) measures. They are part of the Centers for Medicare & Medicaid Services/The Joint Commission aligned measures relating to the administration of fibrinolytic therapy for hospital inpatients and are harmonized with 0437 to the extent that the measures utilize some of the same data elements. The target population for 0288 and 0164 is inpatients with an ICD-10-CM Principal Diagnosis Code for acute myocardial infarction. The target population for 0437 differs in that it includes patients hospitalized for acute ischemic stroke. In addition, the evidence around the timeframe for administration of therapy is different for the AMI and ischemic stroke populations, and 0288 and 0164 include administration of lytic drugs other than activase/alteplase/IV t-PA/recombinant tissue plasminogen activator (rt-PA). Measure 0164 will be removed from the CMS/The Joint Commission aligned measures starting with 01/01/2016 discharges. The target | Program) is similar to NQF #0661 (HOQR), the two measures serve different target populations and purposes: the HOQR measure focuses on imaging in the ED setting, while the HIQR measure focuses on administration of thrombolytic therapy in an inpatient setting. Both measures do, however, share a number of key data elements (i.e., Last Known Well, Date Last Known Well, Time Last Known Well, and Arrival Time). The specifications for the two measures are generally aligned, where possible. As appropriate, the measure maintenance team for the HOQR measure (NQF #0661) incorporates specification updates added by the measure maintenance team for the HIQR measure (NQF #0437) to maintain harmonization (e.g., updates to the appropriate ICD-10 codes to determine measure inclusion). The measure-maintenance teams for both reporting programs meet periodically to resolve any inconsistencies in the interpretation or guidance provided for the shared data elements.<br><br>5b.1 If competing, why superior or rationale for additive value: We did not identify any competing measures that address both the same measure focus and target population as NQF #0661. | measure focuses on the timely administration of tPA rather than whether or not the treatment should be administered. Data demonstrates that shortening door-to-needle times improves outcomes for acute ischemic stroke. Conversely, Measure #0437 assesses whether or not therapy was administered in eligible patients. As a result, the specifications differ where needed based on different populations and different focal points of the measure.<br><br>5b.1 If competing, why superior or rationale for additive value: |

| | 0437 STK-04: Thrombolytic Therapy | 0661 Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival | 1952 Time to Intravenous Thrombolytic Therapy |
|---|---|---|---|
| | population for measure 1952 from the American Heart Association/American Stroke Association also includes patients hospitalized for acute ischemic stroke; however, the measure captures average door-to-needle time and uses a target of less than 60 minutes rather than the proportion of patients who arrive within 2 hours and receive t-PA within 3 hours of time last known well. Measure 0242 is a physician performance measure with a targeted population of ischemic stroke patients identified through CPT codes and could extend to the outpatient setting. This measure evaluates physician practice as opposed to hospital processes. It is no longer NQF-endorsed<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable | | |

**Comparison of NQF #0435, #0438, and #0068**

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| Steward | The Joint Commission | National Committee for Quality Assurance | The Joint Commission |
| Description | This measure captures the proportion of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy,STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. | The percentage of patients 18 years of age and older who were discharged from an inpatient setting with an acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had documentation of routine use of aspirin or another antiplatelet during the measurement year. | This measure captures the proportion of ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two (with the day of arrival being day 1).<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-6: Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. |
| Type | Process | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records N/A<br>No data collection instrument provided Attachment 0068_IVD_Value_Sets_Final.xlsx | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635878644173852080.xls |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635876076083056831.xls | | |
| Level | Facility, Population : National | Clinician : Group/Practice, Clinician : Individual | Facility, Population : National |
| Setting | Hospital/Acute Care Facility | Ambulatory Care : Clinician Office/Clinic | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge | Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year. | Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day two. |
| Numerator Details | One data element is used to calculate the numerator:<br>• Antithrombotic Therapy Prescribed at Discharge – Documentation that antithrombotic therapy was prescribed at hospital discharge. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals “yes” for the data element. | ADMINISTRATIVE<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Refer to Table IVD-E to identify medications for oral anti-platelet therapy.<br>ORAL ANTI-PLATELET THERAPIES (TABLE IVD-E) PRESCRIPTIONS<br>- Aspirin<br>- Clopidogrel<br>- Aspirin-dipyridamole<br>- Prasugrel<br>- Ticagrelor<br>- Ticlopidine<br>---<br>MEDICAL RECORD<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>At a minimum, documentation in the medical record must include a note indicating the date when aspirin or another antiplatelet was prescribed or documentation of prescription | One data element is used to calculate the numerator:<br>• Antithrombotic Therapy Administered by End of hospital Day 2 – Documentation that antithrombotic therapy is administered by the end of hospital day 2. Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals “yes” for the data element. |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | | from another treating physician. | |
| Denominator Statement | Ischemic stroke patients | Patients 18 years or older by the end of the measurement year discharged from an inpatient setting with an AMI, CABG, or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year. | Ischemic stroke patients |
| Denominator Details | Nine data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge. | ADMINISTRATIVE<br>Patients are identified for the eligible population in two ways: by event or by diagnosis. The organization must use both methods to identify the eligible population, but a patient only needs to be identified by one method to be included in the measure.<br>Event. Any of the following during the year prior to the measurement year meet criteria:<br>- MI. Discharged from an inpatient setting with an MI (MI Value Set)*. Use both facility and professional claims to identify MI.<br>-CABG. Discharged from an inpatient setting with a CABG (CABG Value Set)*. Use both facility and professional claims to identify CABG.<br>-PCI. Patients who had a PCI (PCI Value Set)* in any setting.<br>Diagnosis. Patients who meet at least one of the following criteria during both the measurement year and the year prior to the measurement year. Criteria need not be the same across both years.<br>-At least one outpatient visit (Outpatient Value Set)* with an IVD diagnosis (IVD Value Set)*, or | Ten data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Arrival Date – The earliest documented month, day, and year the patient arrived at the hospital.<br>3. Birthdate - The month, day and year the patient was born.<br>4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>5. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD. |

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| | 7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. Reason For Not Prescribing Antithrombotic Therapy at Discharge – Documentation of a reason for not prescribing antithrombotic therapy at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1. | -At least one acute inpatient encounter (Acute Inpatient Value Set)* with an IVD diagnosis (IVD Value Set)*.<br>*Due to the extensive volume of codes associated with identifying the denominator for this measure, we are attaching a separate file with code value sets. See code value sets located in question S.2b.<br>---<br>MEDICAL RECORD<br>Documentation of IVD in the medical record includes:<br>- IVD<br>- Ischemic heart disease<br>- Angina<br>- Coronary atherosclerosis<br>- Coronary artery occlusion<br>- Cardiovascular disease<br>- Occlusion or stenosis of precerebral arteries (including basilar, carotid and vertebral arteries)<br>- Atherosclerosis of renal artery<br>- Atherosclerosis of native arteries of the extremities<br>- Chronic total occlusion of artery of the extremities<br>- Arterial embolism and thrombosis<br>- Atheroembolism.<br>Note: Use paper logs, patient registries or electronic medical records (EMRs) to identify the denominator, then use the medical record to confirm patient eligibility. | 8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. IV OR IA Thrombolytic (t-PA) Therapy Administered at this Hospital or within 24 Hours Prior to Arrival – Documentation demonstrates that the patient received intravenous (IV) or intra-arterial (IA) thrombolytic therapy (t-PA) at this hospital or within 24 hours prior to arrival.<br>Allowable values: Yes or No/UTD.<br>10. Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 – Physician/APN/PA or pharmacist documentation of a reason for not administering antithrombotic therapy by end of hospital day 2.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1 |
| Exclusions | • Less than 18 years of age | Patients who had documentation of use of | • Less than 18 years of age |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | • Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care<br>• Documented reason for not prescribing antithrombotic therapy at discharge | anticoagulant medications during the measurement year. | • Duration of Stay < 2 days<br>• Length of Stay > 120 days<br>• Comfort measures only documented on the day of or day after hospital arrival<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• IV OR IA thrombolytic therapy administered at this hospital or within 24 hours prior to arrival<br>• Documented reason for not administering antithrombotic therapy by end of hospital day 2 |
| Exclusion Details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure. | Patients who had documentation of use of anticoagulant medications during the measurement year.<br>ANTICOAGULANT MEDICATIONS<br>- Apixaban<br>- Argatroban<br>- Bivalirudin<br>- Dabigatran<br>- Dalteparin<br>- Desirudin<br>- Edoxaban<br>- Enoxaparin<br>- Fondaparinux<br>- Heparin<br>- Lepirudin<br>- Rivaroxaban<br>- Tinzaparin<br>- Warfarin | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Duration of Stay (in days) is equal to the Discharge Date minus the Arrival Date. If the Duration of Stay is less than 2 days, the patient is excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day<br>0 or 1) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure.<br>• Patients are excluded if "Yes" is selected for IV |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | • Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Antithrombotic Therapy at Discharge. | | (intravenous) or IA (intra- arterial)Thrombolytic Therapy (t-PA)Administered at This Hospital or Within 24 Hours Prior to Arrival.<br>• Patients are excluded if "Yes" is selected for Reason For Not Administering Antithrombotic Therapy By End of Hospital Day 2. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. | N/A | Not applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop | Step 1: Determine the denominator<br>Patients 18 years of age or older by the end of the measurement year AND who were discharged from an inpatient setting for an AMI, CABG or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year.<br>Step 2: Exclude patients who meet the exclusion criteria<br>Patients on anticoagulant therapy.<br>Step 3: Determine the numerator<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Step 4: Calculate the rate by dividing the numerator (Step 3) by the denominator (after exclusions) (Step 2). No diagram provided | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Comfort Measures Only.<br>3. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop |

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| | processing.<br>b. If Discharge Disposition equals 1, 5, 8 continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and | | processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br>4. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>5. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Arrival Date.<br>6. Check Arrival Date<br>a. If the Arrival Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Arrival Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Arrival Date equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to Duration of Stay calculation.<br>7. Calculate the Duration of Stay. The Duration of |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Antithrombotic Therapy Prescribed at Discharge.<br>7. Check Antithrombotic Therapy Prescribed at Discharge<br>a. If Antithrombotic Therapy Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Antithrombotic Therapy Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Antithrombotic Therapy Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Antithrombotic Therapy at Discharge.<br>8. Check Reason for Not Prescribing Antithrombotic Therapy at Discharge<br>a. If Reason for Not Prescribing Antithrombotic Therapy at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Antithrombotic Therapy at Discharge equals Yes, the case will proceed to a | | Stay, in days, is equal to the Discharge Date minus the Arrival Date.<br>8. Check Duration of Stay<br>a. If the Duration of Stay is greater than or equal to zero and less than 2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the Duration of Stay is greater than or equal to 2, continue processing and proceed to IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival.<br>9. Check IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival<br>a. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If IV or IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival equals No, continue processing and proceed to Antithrombotic Therapy Administered By End of Hospital Day 2.<br>10. Check Antithrombotic Therapy Administered By End of Hospital Day 2<br>a. If Antithrombotic Therapy Administered By End of Hospital Day 2 is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Prescribing Antithrombotic Therapy at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 | | b. If Antithrombotic Therapy Administered By End of Hospital Day 2 equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Antithrombotic Therapy Administered By End of Hospital Day 2 equals No, continue processing and check Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2.<br>11. Check Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2<br>a. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Administering Antithrombotic Therapy By End of Hospital Day 2 equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 |
| Submission items | 5.1 Identified measures: 0325 : Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy<br>0438 : STK 05: Antithrombotic Therapy By End of Hospital Day Two<br>0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet<br><br>5a.1 Are specs completely harmonized? No | 5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy<br>0142 : Aspirin prescribed at discharge for AMI<br>0076 : Optimal Vascular Care<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE | 5.1 Identified measures: 0325 : Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy<br>0435 : STK 02: Discharged on Antithrombotic Therapy<br>0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet<br><br>5a.1 Are specs completely harmonized? No |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | 5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0438 Antithrombotic Therapy By End of Hospital Day 2 is the fifth (STK-5) measure in The Joint Commission stroke core measure set and also targets the ischemic stroke population; however, the timeframe for antithrombotic administration is different in this measure than STK-2. STK-5 focuses on the early management of stroke care and antithrombotic therapy administered within the first 48 hours of acute ischemic stroke onset rather than discharge. All common data elements for these measures are completely harmonized. Measure 0068 is a physician performance measure and could extend to the outpatient setting. Measure 0068 encompasses a different target population, specifically patients with ischemic vascular disease who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI). As previously noted, this measure evaluate physician practice as opposed to hospital processes.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable | TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1.<br><br>5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2<br>Our current measure, NQF 0068 – Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet, assesses the percentage of patients 18 years of age and older who were discharged from an inpatient setting with an acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, AND patients who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had documentation of the routine use of aspirin or another antiplatelet during the measurement year. NQF 0068 uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, providing a wide array of options for how data can be collected and reported.<br>The following is a description of the differences and the impact on interpretability and data collection burden between NQF 0068 and each related measure listed in 5.1a:<br>NQF 0142 – ASPIRIN PRESCRIBED AT DISCHARGE FOR AMI<br>This measure assesses the percentage of AMI patients, 18 years and older, who are | 5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0435 Discharged on Antithrombotic Therapy is the second (STK-2) measure in The Joint Commission stroke core measure set and also targets the ischemic stroke population; however, the timeframe for antithrombotic administration is different in this measure than STK-5. STK-2 focuses on hospital discharge and the prescription of antithrombotic medications at that time. All common data elements are completely aligned between the two measures. Measure 0068 is a physician performance measure and thus a different level of measurement. Measure 0068 encompasses a different target population, specifically patients with ischemic vascular disease who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI). Both of these measures evaluate physician practice as opposed to hospital processes<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

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| | | prescribed aspirin at hospital discharge. The measure population only includes patients who have had an AMI, whereas NQF 0068 includes patients who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0142 focuses only on aspirin prescribed at discharge while NQF 0068 focuses on documentation of the use of any antiplatelet medication during the measurement year. NQF 0142 is a facility-level measure that uses administrative claims and paper medical records from the inpatient setting; NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities. Additionally, both use value sets of codes to identify patients with AMI that do not conflict.<br>NQF 0067 – CHRONIC STABLE CORONARY ARTERY DISEASE: ANTIPLATELET THERAPY<br>This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease (CAD) who were seen by a physician within a 12-month period and who were prescribed aspirin or clopidogrel. The focus of this measure is very similar to NQF 0068 in that it | |

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| | | assesses the routine use of antiplatelet therapy in a twelve-month period for patients with CAD. However, NQF 0068 includes more antiplatelet medications than just aspirin or clopidogrel and includes a broader population of patients with cardiovascular disease than just those with CAD.<br>Although NQF 0067 and NQF 0068 are both physician-level measures that are specified to collect data from administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, the impact on interpretability of publically-reported rates or added burden of data collection should be minimal because NQF 0067 is currently only reported through registry data. Additionally, NQF 0067 is focused on only on patients with CAD, while NQF 0068 is focused on a broader population of patients with cardiovascular disease who would benefit from the use of antiplatelet medications.<br>NQF 0076 – OPTIMAL VASCULAR CARE<br>This composite measure assesses the percentage of adult patients ages 18 to 75 who have ischemic vascular disease with optimally-managed modifiable risk factors (blood pressure, tobacco-free status, daily aspirin use) at their most recent visit with a physician during the measurement year. While the focus populations for NQF 0076 and NQF 0068 are very similar, NQF 0076 is a composite that includes assessment of blood pressure control and tobacco use status. NQF 0068 assesses the routine use of aspirin or other antiplatelet medications while NQF 0076 | |

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| | | focuses only on aspirin use. NQF 0076 does not use administrative claims though it does use electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, which is similar to NQF 0068.<br>Despite the similarities, there should be minimal impact on interpretability of publically-reported rates or added burden of data collection between the two measures since NQF 0076 is a composite of multiple indicators while NQF 0068 is focused only on antiplatelet therapy.<br>NQF 2452 – PERCUTANEOUS CORONARY INTERVENTION (PCI): POST-PROCEDURAL OPTIMAL MEDICAL THERAPY (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 2452 is a composite measure that assesses the percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 2452 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 2452 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 2452 is a physician-level measure that uses data from registries while NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and | |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | | paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different and the data for each measure is collected from different data sources by different entities.<br>NQF 0964 – THERAPY WITH ASPIRIN, P2Y12 INHIBITOR, AND STATIN AT DISCHARGE FOLLOWING PCI IN ELIGIBLE PATIENTS (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 0964 is a composite measure that assesses the percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 0964 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0964 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 0964 is a facility-level measure that uses data from registries while NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of | |

| | 0435: STK 02: Discharged on Antithrombotic Therapy | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0438: STK 05: Antithrombotic Therapy By End of Hospital Day Two |
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| | | data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities.<br>ANSWER FOR SECTION 5b.1<br>Our current measure, NQF 0068, has a long history of use and is implemented in four national programs: PQRS, EHR Incentive Program, CMS ACO Shared Savings Program, and the Heart/Stroke Recognition Program. | |

**Comparison of NQF #0467, #2876 and #2877**

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| Steward | Agency for Healthcare Research and Quality | Centers for Medicare & Medicaid Services | Centers for Medicare & Medicaid Services |
| Description | In-hospital deaths per 1,000 hospital discharges with acute stroke as a principal diagnosis for patients ages 18 years and older. Includes metrics for discharges grouped by type of stroke. Excludes obstetric discharges and transfers to another hospital.<br><br>[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the | This stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This is a newly developed measure with a cohort and outcome that is harmonized with the CMS's current publicly reported claims-based stroke mortality measure and includes the National Institutes | This hybrid stroke mortality measure estimates the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. This measure is a newly developed measure with a cohort and outcome that is harmonized with the CMS's current publicly reported claims-based stroke mortality measure, and includes the National Institutes of |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | software by 1,000 to report in-hospital deaths per 1,000 hospital discharges.] | of Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. This measure uses Medicare fee-for-service (FFS) administrative claims for the cohort derivation, outcome, and risk adjustment. | Health (NIH) Stroke Scale as an assessment of stroke severity in the risk-adjustment model. The measure is referred to as a hybrid because it is CMS's intention to calculate the measure using two data sources: Medicare fee-for-service (FFS) administrative claims and clinical electronic health record (EHR) data. |
| Type | Outcome | Outcome | Outcome |
| Data Source | Administrative claims<br>HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. | Administrative claims, Other, Electronic Clinical Data : Registry For measure implementation the data sources will be:<br>1. Medicare Part A inpatient and Part B outpatient claims: This data source contains claims data for fee-for service inpatient and outpatient services including: Medicare inpatient hospital care, outpatient hospital services, skilled nursing facility care, some home health agency services, as well as inpatient and outpatient physician claims for the 12 months prior to an index admission.<br>2. Medicare Enrollment Database (EDB): This database contains Medicare beneficiary demographic, benefit/coverage, and vital status information. This data source was used to obtain information on several inclusion/exclusion indicators such as Medicare status on admission, as well as vital status. These data have previously been shown to accurately reflect patient vital status (Fleming et al., 1992).<br>3. For measure development purposes only, we linked the data sources above with data | Administrative claims, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Laboratory, Other, Electronic Clinical Data : Registry For measure implementation the data sources will be:<br>1. Medicare Part A inpatient and Part B outpatient claims: This data source contains claims data for FFS inpatient and outpatient services including: Medicare inpatient hospital care, outpatient hospital services, skilled nursing facility care, some home health agency services, as well as inpatient and outpatient physician claims for the 12 months prior to an index admission.<br>2. Medicare Enrollment Database (EDB): This database contains Medicare beneficiary demographic, benefit/coverage, and vital status information. This data source was used to obtain information on several inclusion/exclusion indicators such as Medicare status on admission as well as vital status. These data have previously been shown to accurately reflect patient vital status (Fleming et al., 1992).<br>3. Electronic clinical data: The measure will be |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | | from the AHA/ASA GWTG-Stroke Registry. The registry data were used to obtain the National Institutes of Health (NIH) Stroke Scale scores and clinical risk variables. When this measure is implemented NIH Stroke Scale scores will be derived from ICD-10 codes in Medicare claims.<br>Reference:<br>Fleming C, Fisher ES, Chang CH, Bubolz TA, Malenka DJ. Studying outcomes and hospital utilization in the elderly: The advantages of a merged data base for Medicare and Veterans Affairs hospitals. Medical Care. 1992; 30(5): 377-91. Data sources for the all-payer update<br>No data collection instrument provided<br>Attachment NQF_2876_Claims-Only_Stroke_Mortality_S2b_Mortality_Data_Dictionary_v1.0-635884757617681755.xlsx | implemented using electronic clinical data from hospitals' EHRs for risk adjustment. Electronic clinical data includes laboratory results and vital signs at the patient level for all patients included in the cohort.<br><br>Reference:<br>Fleming C, Fisher ES, Chang CH, Bubolz TA, Malenka DJ. Studying outcomes and hospital utilization in the elderly: The advantages of a merged data base for Medicare and Veterans Affairs hospitals. Medical Care. 1992; 30(5): 377-91. Data sources for the all-payer update<br>No data collection instrument provided<br>Attachment NQF_2877_Hybrid_Stroke_Mortality_S2b_Mortality_Data_Dictionary_v1.0.xlsx |
| Level | Facility | Facility | Facility |
| Setting | Hospital/Acute Care Facility | Hospital/Acute Care Facility | Hospital/Acute Care Facility |
| Numerator Statement | Overall:<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.<br>Stratum A (Subarachnoid hemorrhage):<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.<br>Stratum B (Intracerebral hemorrhage) :<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator. | The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke. | The outcome for this measure is 30-day, all-cause mortality. We define mortality as death from any cause within 30 days of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke. |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | Stratum C (Ischemic stroke):<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator. | | |
| Numerator Details | Overall:<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.<br>Stratum A (Subarachnoid hemorrhage):<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.<br>Stratum B (Intracerebral hemorrhage) :<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.<br>Stratum C (Ischemic stroke):<br>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator. | The measure outcome is death from any cause within 30 days of the index admission date. As currently specified, we identify deaths for FFS Medicare patients, age 65 years and older, in the Medicare Enrollment Database (EDB). | The measure outcome is death from any cause within 30 days of the admission date of the index admission. As currently specified, we identify deaths for FFS Medicare patients, age 65 years and older in the Medicare Enrollment Database (EDB). |
| Denominator Statement | Overall:<br>Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for subarachnoid hemorrhage or a principal ICD-9-CM diagnosis code for intracerebral hemorrhage or a principal ICD-9-CM diagnosis code for ischemic stroke. | The cohort includes inpatient admissions to all non-federal, short-term, acute care hospitals for Medicare FFS patients age 65 years and older with a principal discharge diagnosis of acute ischemic stroke.<br>Additional details are provided in S.9 Denominator Details. | The cohort includes inpatient admissions for Medicare FFS patients, age 65 years and older, who were discharged from non-federal, short-term, acute care hospitals with a principal discharge diagnosis of acute ischemic stroke.<br>Additional details are provided in S.9 Denominator Details. |
| Denominator Details | ICD-9-CM Subarachnoid hemorrhage diagnosis codes:<br>430 SUBARACHNOID HEMORRHAGE<br>ICD-9-CM Intracerebral hemorrhage | The denominator includes all Medicare FFS beneficiaries, age 65 and over, with a principal discharge diagnosis of acute ischemic stroke. To be included in the measure cohort used in | The denominator includes all Medicare FFS beneficiaries, age 65 and over with a principal discharge diagnosis of acute ischemic stroke. To be included in the measure cohort used in |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | diagnosis codes:<br>431 INTRACEREBRAL HEMORRHAGE<br>4320 NONTRAUM EXTRADURAL HEM<br>4321 SUBDURAL HEMORRHAGE<br>4329 INTRACRANIAL HEMORR NOS<br>ICD-9-CM Ischemic stroke diagnosis codes:<br>43301 BASI ART OCCL W/ INFARCT<br>43311 CAROTD OCCL W/ INFRCT<br>43321 VERTB ART OCCL W/ INFRCT<br>43331 MULT PRECER OCCL W/ INFRCT<br>43381 PRECER OCCL NEC W/ INFRCT<br>43391 PRECER OCCL NOS W/ INFRCT<br>43401 CERE THROMBOSIS W/ INFRCT<br>43411 CERE EMBOLISM W/ INFRCT<br>43491 CEREB OCCL NOS W/ INFRCT<br>Note: For discharges prior to September 30, 2014 (FY2004 or earlier), the following code is included in the overall denominator. This code is not included in any stratum.<br>436 CVA<br>[NOTE: Overall denominator may not match the sum of the strata denominators because the strata may not be mutually exclusive.]<br>Stratum A (Subarachnoid hemorrhage):<br>Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for subarachnoid | public reporting, patients must meet the following additional inclusion criteria:<br>1. Enrolled in Medicare fee-for-service (FFS) during the index admission;<br>2. Not transferred from another acute care facility; and<br>3. Enrolled in Part A and Part B Medicare for the 12 months prior to the date of index admission.<br>ICD-9-CM codes that define the patient cohort:<br>433.01 Occlusion and stenosis of basilar artery with cerebral infarction<br>433.11 Occlusion and stenosis of carotid artery with cerebral infarction<br>433.21 Occlusion and stenosis of vertebral artery with cerebral infarction<br>433.31 Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction<br>433.81 Occlusion and stenosis of other specified precerebral artery with cerebral infarction<br>433.91 Occlusion and stenosis of unspecified precerebral artery with cerebral infarction<br>434.01 Cerebral thrombosis with cerebral infarction<br>434.11 Cerebral embolism with cerebral infarction<br>434.91 Cerebral artery occlusion, unspecified with cerebral infarction | public reporting, patients must meet the following additional inclusion criteria:<br>1. Enrolled in Medicare fee-for-service (FFS) during the index admission;<br>2. Not transferred from another acute care facility; and<br>3. Enrolled in Part A and Part B Medicare for the 12 months prior to the date of index admission.<br>ICD-9-CM codes that define the patient cohort:<br>433.01 Occlusion and stenosis of basilar artery with cerebral infarction<br>433.11 Occlusion and stenosis of carotid artery with cerebral infarction<br>433.21 Occlusion and stenosis of vertebral artery with cerebral infarction<br>433.31 Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction<br>433.81 Occlusion and stenosis of other specified precerebral artery with cerebral infarction<br>433.91 Occlusion and stenosis of unspecified precerebral artery with cerebral infarction<br>434.01 Cerebral thrombosis with cerebral infarction<br>434.11 Cerebral embolism with cerebral infarction<br>434.91 Cerebral artery occlusion, unspecified with cerebral infarction<br>436 Acute, but ill-defined, cerebrovascular disease<br>ICD-10 codes that define the patient cohort: |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | hemorrhage (see above).<br>Stratum B (Intracerebral hemorrhage) :<br>Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for intracerebral hemorrhage stroke (see above).<br>Stratum C (Ischemic stroke):<br>Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for ischemic stroke (see above). | 436 Acute, but ill-defined, cerebrovascular disease<br>ICD-10 codes that define the patient cohort:<br>I63.22 Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries<br>I63.139 Cerebral infarction due to embolism of unspecified carotid artery<br>I63.239 Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries<br>I63.019 Cerebral infarction due to thrombosis of unspecified vertebral artery<br>I63.119 Cerebral infarction due to embolism of unspecified vertebral artery<br>I63.219 Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries<br>I63.59 Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery<br>I63.20 Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries<br>I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery<br>I63.40 Cerebral infarction due to embolism of unspecified cerebral artery<br>I63.50 Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery<br>I67.8 Other specified cerebrovascular diseases<br>I67.89 Other cerebrovascular diseases | I63.22 Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries<br>I63.139 Cerebral infarction due to embolism of unspecified carotid artery<br>I63.239 Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries<br>I63.019 Cerebral infarction due to thrombosis of unspecified vertebral artery<br>I63.119 Cerebral infarction due to embolism of unspecified vertebral artery<br>I63.219 Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries<br>I63.59 Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery<br>I63.20 Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries<br>I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery<br>I63.40 Cerebral infarction due to embolism of unspecified cerebral artery<br>I63.50 Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery<br>I67.8 Other specified cerebrovascular diseases<br>An ICD-9 to ICD-10 crosswalk is attached in field S.2b. (Data Dictionary or Code Table). |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | | An ICD-9 to ICD-10 crosswalk is attached in field S.2b. (Data Dictionary or Code Table). | |
| Exclusions | Overall:<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum A (Subarachnoid hemorrhage):<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum B (Intracerebral hemorrhage) :<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium) | The measure excludes admissions for patients:<br>1. With inconsistent or unknown vital status or other unreliable data;<br>2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and<br>3. Discharged against medical advice (AMA).<br>For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort. | The measure excludes admissions for patients:<br>1. With inconsistent or unknown vital status or other unreliable data;<br>2. Enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission; and<br>3. Discharged against medical advice (AMA).<br>For patients with more than one admission for stroke in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort. |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | • with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum C (Ischemic stroke):<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) | | |
| Exclusion Details | Overall:<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum A (Subarachnoid hemorrhage):<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2) | 1. Inconsistent vital status or unreliable data: We do not include stays for patients where the age is greater than 115, where the gender is neither male nor female, where the admission date is after the date of death in the Medicare Enrollment Database, or where the date of death occurs before the date of discharge but the patient was discharged alive.<br>2. Hospice enrollment in the 12 months prior to or on the index admission is identified using hospice data and the Inpatient Standard Analytic File (SAF). These patients are likely continuing to seek comfort measures only; thus, mortality is not necessarily an adverse outcome or signal of poor quality care for these patients. | 1. Inconsistent vital status or unreliable data: We do not include stays for patients where the age is greater than 115, where the gender is neither male nor female, where the admission date is after the date of death in the Medicare Enrollment Database, or where the date of death occurs before the date of discharge but the patient was discharged alive.<br>2. Hospice enrollment in the 12 months prior to or on the index admission is identified using hospice data and the Inpatient Standard Analytic File (SAF). These patients are likely continuing to seek comfort measures only; thus, mortality is not necessarily an adverse outcome or signal of poor quality care for these patients.<br>3. Discharges against medical advice (AMA) are |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|---|---|
| | • MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum B (Intracerebral hemorrhage) :<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)<br>Stratum C (Ischemic stroke):<br>Exclude cases:<br>• transferring to another short-term hospital (DISP=2)<br>• MDC 14 (pregnancy, childbirth, and puerperium)<br>• with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) | 3. Discharges against medical advice (AMA) are identified using the discharge disposition indicator. After all exclusions are applied, the measure randomly selects one index admission per patient per year for inclusion in the cohort so that each episode of care is mutually independent with the same probability of the outcome. For each patient, the probability of death increases with each subsequent admission, and therefore, the episodes of care are not mutually independent. Similarly, for the three year combined data, when index admissions occur during the transition between measure reporting periods (June and July of each year) and both are randomly selected for inclusion in the measure, the measure includes only the June admission. The July admissions are excluded to avoid assigning a single death to two admissions. | identified using the discharge disposition indicator. After all exclusions are applied, the measure randomly selects one index admission per patient per year for inclusion in the cohort so that each episode of care is mutually independent with the same probability of the outcome. For each patient, the probability of death increases with each subsequent admission, and therefore, the episodes of care are not mutually independent. Similarly, for the three year combined data, when index admissions occur during the transition between measure reporting periods (June and July of each year) and both are randomly selected for inclusion in the measure, the measure includes only the June admission. The July admissions are excluded to avoid assigning a single death to two admissions. |
| Risk Adjustment | Statistical risk model<br>The predicted value for each case is | Statistical risk model<br>Our approach to risk adjustment is tailored to | Statistical risk model<br>Our approach to risk adjustment is tailored to |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | computed using a hierarchical model (logistic regression using Generalized Estimating Equations (GEE) to account for clustering of patients within hospitals) and covariates for gender, age (in 5-year age groups pooled), APR-DRG and APR-DRG Risk of Mortality subclass, MDC and availability of Point of Origin (UB-04). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. | and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, "Standards for Statistical Models Used for Public Reporting of Health Outc<br>Available in attached Excel or csv file at S.2b | and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, "Standards for Statistical Models Used for Public Reporting of Health Outc<br>Available in attached Excel or csv file at S.2b |
| Stratification | The indicator is stratified into three groups by the type of stroke:<br><br>Cases are assigned to strata according to a hierarchy based on mortality, with cases being assigned to the stratum with the highest mortality for which the case qualifies. In the case of Stroke Mortality the current hierarchy is as follows:<br><br>Strata hierarchy (listed from highest mortality to lowest mortality):<br>1. Stratum B (Intracerebral hemorrhage)<br>2. Stratum A (Subarachnoid hemorrhage)<br>3. Stratum C (Ischemic stroke) | N/A | N/A |
| Type Score | Rate/proportion better quality = lower | Rate/proportion better quality = lower score | Rate/proportion better quality = lower score |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|---|---|
| | score | | |
| Algorithm | The indicator is expressed as a rate, defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level records are flagged to identify the outcome of interest and 2) the population at risk. 3) Calculate observed rates as the sum of the records flagged in the numerator divided by the sum of the records flag in the denominator for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records to compute a predicted value. For indicators that are not risk-adjusted, this is the reference population rate. The expected rate is computed as the sum of the predicted value for each record divided by the number of records flagged in the population at risk for the unit of analysis of interest (i.e., hospital). 5) Calculate risk-adjusted rate using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate using an | The measure estimates hospital-level, 30-day, all-cause RSMRs following hospitalization for stroke using hierarchical logistic regression models. In brief, the approach simultaneously models data at the patient and hospital levels to account for variance in patient outcomes within and between hospitals (Normand and Shahian, 2007). At the patient level, it models the log-odds of mortality within 30 days of index admission using age, selected clinical covariates, and a hospital-specific intercept. At the hospital level, it models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then after adjusting for patient risk, the hospital intercepts should be identical across all hospitals.<br>The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths at a given hospital, multiplied by the national observed mortality rate. For each hospital, the numerator of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the denominator is the number of deaths | The measure estimates hospital-level, 30-day, all-cause RSMRs following hospitalization for stroke using hierarchical logistic regression models. In brief, the approach simultaneously models data at the patient and hospital levels to account for variance in patient outcomes within and between hospitals (Normand and Shahian, 2007). At the patient level, it models the log-odds of mortality within 30 days of index admission using age, selected clinical covariates, and a hospital-specific intercept. At the hospital level, it models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then after adjusting for patient risk, the hospital intercepts should be identical across all hospitals.<br>The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths at a given hospital, multiplied by the national observed mortality rate. For each hospital, the numerator of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the denominator is the number of deaths expected based on the nation's performance |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|---|---|
| | Empirical Bayes shrinkage estimator (W) as the weighted average of the risk-adjusted rate and the reference population rate. The shrinkage estimate reflects a reliability adjustment unique to each indicator. | expected based on the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality rates or better quality, and a higher ratio indicates higher-than-expected mortality rates or worse quality.<br>The "predicted" number of deaths (the numerator) is calculated by using the coefficients estimated by regressing the risk factors and the hospital-specific intercept on the risk of mortality. The estimated hospital-specific intercept is added to the sum of the estimated regression coefficients multiplied by the patient characteristics. The results are transformed and summed over all patients attributed to a hospital to get a predicted value. The "expected" number of deaths (the denominator) is obtained in the same manner, but a common intercept using all hospitals in our sample is added in place of the hospital-specific intercept. The results are transformed and summed over all patients in the hospital to get an expected value. To assess hospital performance for each reporting period, we re-estimate the model coefficients using the years of data in that period.<br>This calculation transforms the ratio of | with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality rates or better quality, and a higher ratio indicates higher-than-expected mortality rates or worse quality.<br>The "predicted" number of deaths (the numerator) is calculated by using the coefficients estimated by regressing the risk factors and the hospital-specific intercept on the risk of mortality. The estimated hospital-specific intercept is added to the sum of the estimated regression coefficients multiplied by the patient characteristics. The results are transformed and summed over all patients attributed to a hospital to get a predicted value. The "expected" number of deaths (the denominator) is obtained in the same manner, but a common intercept using all hospitals in our sample is added in place of the hospital-specific intercept. The results are transformed and summed over all patients in the hospital to get an expected value. To assess hospital performance for each reporting period, we re-estimate the model coefficients using the years of data in that period.<br>This calculation transforms the ratio of predicted over expected into a rate that is |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | | predicted over expected into a rate that is compared to the national observed mortality rate. The hierarchical logistic regression models are described fully in the original methodology report (Grosso et al., 2011).<br>References:<br>Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22(2): 206-226. Available in attached appendix at A.1 | compared to the national observed mortality rate. The hierarchical logistic regression models are described fully in the original methodology report (Grosso et al., 2011).<br>References:<br>Normand S-LT, Shahian DM. 2007. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Stat Sci 22(2): 206-226. Available in attached appendix at A.1 |
| Submission items | 5.1 Identified measures: 0705 : Proportion of Patients Hospitalized with Stroke that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)<br>0661 : Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation within 45 minutes of ED Arrival<br>0240 : Stroke and Stroke Rehabilitation: Venous Thromboembolism (VTE) Prophylaxis for Ischemic Stroke or Intracranial Hemorrhage<br>0325 : Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy<br>0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge<br>0242 : Stroke and Stroke Rehabilitation: Tissue Plasminogen Activator (t-PA) Considered | 5.1 Identified measures: 0467 : Acute Stroke Mortality Rate (IQI 17)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: We did not include in our list of related measures any non-outcome (such as process) measures with the same target population as our measure. Because this is an outcome measure, clinical coherence of the cohort takes precedence over alignment with related non-outcome measures. Furthermore, non-outcome measures are limited due to broader patient exclusions. This is because they typically only include a specific subset of patients who are eligible for that measure (for example, patients who receive a specific medication or undergo a specific procedure). Additionally, this measure and the NQF endorsed Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure | 5.1 Identified measures: 0467 : Acute Stroke Mortality Rate (IQI 17)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: We did not include in our list of related measures any non-outcome (such as process) measures with the same target population as our measure. Because this is an outcome measure, clinical coherence of the cohort takes precedence over alignment with related non-outcome measures. Furthermore, non-outcome measures are limited due to broader patient exclusions. This is because they typically only include a specific subset of patients who are eligible for that measure (for example, patients who receive a specific medication or undergo a specific procedure). Additionally, this measure and the NQF Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure #0467 are complementary and |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | 0243 : Stroke and Stroke Rehabilitation: Screening for Dysphagia<br>0244 : Stroke and Stroke Rehabilitation: Rehabilitation Services Ordered<br>0434 : STK-01: Venous Thromboembolism (VTE) Prophylaxis<br>0435 : STK 02: Discharged on Antithrombotic Therapy<br>0436 : STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter<br>0437 : STK 04: Thrombolytic Therapy<br>0438 : STK 05: Antithrombotic Therapy By End of Hospital Day Two<br>0439 : STK-06: Discharged on Statin Medication<br>0440 : STK-08: Stroke Education<br>0441 : STK-10: Assessed for Rehabilitation<br>0442 : Functional Communication Measure: Writing<br>0443 : Functional Communicaton Measure: Swallowing<br>0444 : Functional Communication Measure: Spoken Language Expression<br>0445 : Functional Communication Measure: Spoken Language Comprehension<br>0446 : Functional Communicaton Measure: Reading<br>0448 : Functional Communication | #0467 are complementary and related rather than competing measures. Although they both assess mortality for patients admitted to acute care hospitals with a principal discharge diagnosis of acute ischemic stroke, the specified outcomes are different. Our measure assesses 30-day mortality, while #0467 assesses inpatient mortality. The 30-day mortality and inpatient mortality outcomes each have distinct advantages and uses, which make them complementary (and related) as opposed to competing. For example the 30-day period provides a broader perspective on hospital care and utilizes a standard time period to examine hospital performance to avoid bias by differences in length of stay among hospitals. However, in some settings it may not be feasible to capture post-discharge mortality, making the inpatient measure more useable. We have previously consulted with AHRQ to examine harmonization of the measures' cohort. As a result of that collaboration, we have found that the measures' cohorts are harmonized to the extent possible and that the small differences in cohort inclusion and exclusion criteria are appropriate because the measures assess different outcomes.<br><br>5b.1 If competing, why superior or rationale for additive value: This measure looks at a longer outcome time frame (30-days versus in-hospital) and incorporates stroke severity into | related rather than competing measures. Although they both assess mortality for patients admitted to acute care hospitals with a principal discharge diagnosis of acute ischemic stroke, the specified outcomes are different. Our measure assesses 30-day mortality while #0467 assesses inpatient mortality. The 30-day mortality and inpatient mortality outcomes each have distinct advantages and uses, which make them complementary (and related) as opposed to competing. For example the 30-day period provides a broader perspective on hospital care and utilizes a standard time period to examine hospital performance to avoid bias by differences in length of stay among hospitals. However, in some settings it may not be feasible to capture post-discharge mortality, making the inpatient measure more useable. We have previously consulted with AHRQ to examine harmonization of the measures' cohort. As a result of that collaboration, we have found that the measures' cohorts are harmonized to the extent possible and that the small differences in cohort inclusion and exclusion criteria are appropriate because the measures assess different outcomes. The NQF Acute Stroke Mortality Rate (IQI 17) (AHRQ) Measure #0467 is also intended for patients 18 years of age and older, which represents a different cohort than the 65 and older Medicare population for this new hybrid measure.<br><br>5b.1 If competing, why superior or rationale for |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
|---|---|---|---|
| | Measure: Memory<br>0449 : Functional Communicaton Measure: Attention<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: All but one of the related endorsed measures are measures of the process of care for patients with stroke. Therefore, these measures have similar target populations but different measure foci. The lone endorsed outcome measure other than this measure includes a wide variety of potentially avoidable complicatons. Due to the large number of related measures and incomplete specifications currently available online, we are currently contacting measure developers for additional information to assess and promote harmonization when possible. Comparing the denominator criterion for this measure with the denominator criteria for STK measures from The Joint Commission, there are minor differences. The AHRQ specification includes all ischemic and hemorrhagic infarcts. The Joint Commission specification adds 433.10 (carotid occlusion without infarct) and | the risk-model.<br>The current publicly reported measure, Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure, is a potentially competing measure. It is CMS intent to replace the current measure in any given program with this newly developed measure, which includes stroke severity in the risk model.<br><br>The Hybrid Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Acute Ischemic Stroke with Risk Adjustment for Stroke Severity measure is also being submitted to NQF for endorsement. This measure uses a combination of claims and electronic health records (EHR) data for risk adjustment but is otherwise harmonized with the new claims-only measure. It is CMS intent to implement only one of the new stroke mortality measures (this claims-only measure or the hybrid measure) in any given program. | additive value: This measure looks at a longer outcome time frame (30-days versus in-hospital) and incorporates stroke severity into the risk-model.<br>The current publicly reported measure, Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure, is a potentially competing measure. It is CMS intent to replace the current measure in any given program with this newly developed measure, which includes stroke severity in the risk model.<br><br>The Claims-based 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Acute Ischemic Stroke with Risk Adjustment for Stroke Severity measure is also being submitted to NQF for endorsement. This measure uses only claims but is otherwise harmonized with this new hybrid measure. It is CMS intent to implement only one of the new stroke mortality measures (this hybrid measure or the claims-only measure) in any given program. |

| | 0467 Acute Stroke Mortality Rate (IQI 17) | 2876 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke hospitalization with claims-based risk adjustment for stroke severity | 2877 Hybrid hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute ischemic stroke with risk adjustment for stroke severity |
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| | 434.00 (cerebral thrombosis without infarct), and it drops intracranial hemorrhagic infarcts without specified subarachnoid or intracerebral hemorrhage (e.g., 432.x). AHRQ believes that these differences are justified, but they comprise less than 5% of the total denominator, which would make harmonization potentially appropriate. The AMA-PCPI measures for Stroke and Stroke Rehabilitation also exclude hemorrhagic infarcts other than intracerebral hemorrhages, and they include selected TIA (435.9) and late effects (438.2, 438.89, 438.9) codes, which would not be appropriate for an inpatient mortality measure.<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable. | | |

**Comparison of NQF #0434, #0239, and #0371**

| | 0434: STK-01: Venous Thromboembolism (VTE) Prophylaxis | 0239: Perioperative Care: Venous Thromboembolism (VTE) Prophylaxis | 0371: Venous Thromboembolism Prophylaxis |
|---|---|---|---|
| Steward | The Joint Commission | AMA-convened Physician Consortium for Performance Improvement | The Joint Commission |
| Description | This measure captures the proportion of ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. | Percentage of surgical patients aged 18 years and older undergoing procedures for which VTE prophylaxis is indicated in all patients, who had an order for Low Molecular Weight Heparin (LMWH), Low-Dose Unfractionated Heparin (LDUH), adjusted-dose warfarin, fondaparinux or mechanical prophylaxis to be given within 24 hours prior to incision time or within 24 hours after surgery end time | This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. This measure is part of a set of six nationally implemented prevention and treatment measures that address VTE (VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6:<br>Hospital Acquired Potentially-Preventable VTE) that are used in The Joint Commission's accreditation process. |
| Type | Process | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of | Administrative claims, Electronic Clinical Data, Paper Medical Records, Electronic Clinical Data : Registry<br>No data dictionary | Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Laboratory, Paper Medical Records Each data element in the data dictionary includes suggested data sources.<br>The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. |

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| | the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1.xls | | The vendor may not offer the measure set to hospitals until verification has been passed. |
| Level | Facility, Population : National | Clinician : Group/Practice, Clinician : Individual | Facility, Population : National |
| Setting | Hospital/Acute Care Facility | Ambulatory Care : Ambulatory Surgery Center (ASC), Hospital/Acute Care Facility | Hospital/Acute Care Facility |
| Numerator Statement | Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission. | Surgical patients who had an order for LMWH, LDUH, adjusted-dose warfarin, fondaparinux or mechanical prophylaxis to be given within 24 hours prior to incision time or within 24 hours after surgery end time | Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given:<br>• the day of or the day after hospital admission<br>• the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission |
| Numerator Details | Four data elements are used to calculate the numerator:<br>• Reason for No VTE Prophylaxis – Hospital Admission - Documentation of a reason why no mechanical or pharmacological prophylaxis was administered at hospital admission.<br>Allowable values: Yes or No/UTD.<br>• Reason for Oral Factor Xa Inhibitor – Documentation of a reason why Oral Factor Xa Inhibitor was administered for VTE prophylaxis.<br>Allowable values: Yes or No/UTD.<br>• VTE Prophylaxis – The type of venous thromboembolism prophylaxis documented in the medical record.<br>Allowable values: 1 Low dose | Numerator Instructions: There must be documentation of order (written order, verbal order, or standing order/protocol) for VTE prophylaxis OR documentation that VTE prophylaxis was given.<br>Definition:<br>Mechanical Prophylaxis – Does not include TED hose.<br>Report CPT Category II code: 4044F – Documentation that an order was given for venous thromboembolism (VTE) prophylaxis to be given within 24 hours prior to incision time or 24 hours after surgery end time<br>Note: A single CPT Category II code is provided for VTE prophylaxis ordered or VTE prophylaxis given. If VTE prophylaxis is given, report 4044F. | Six data elements are used to calculate the numerator:<br>1. Reason for No VTE Prophylaxis – Hospital Admission - Documentation why mechanical or pharmacologic VTE prophylaxis was not administered at hospital admission. Allowable values: Yes or No/UTD.<br>2. Reason for Oral Factor Xa Inhibitor-Documentation of an acceptable reason for Oral Factor Xa Inhibitor use for VTE Prophylaxis. Allowable values: Yes or No.<br>3. Surgery End Date - The date the surgical procedure ended after hospital admission.<br>4.Surgical Procedure - A surgical procedure was performed using general or neuraxial anesthesia the day of or the day after hospital admission. Allowable values: Yes or No/UTD.<br>5. VTE Prophylaxis - The type of venous |

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| | unfractionated heparin (LDUH); 2 Low molecular weight heparin (LMWH); 3 Intermittent pneumatic compression devices (IPC); 4 Graduated compression stockings (GCS); 5 Factor Xa Inhibitor; 6 Warfarin; 7 Venous foot pumps (VFP); 8 Oral Factor Xa Inhibitor; 9 Aspirin; A None of the above or not documented or unable to determine from medical record documentation.<br>• VTE Prophylaxis Date – The month, day, and year that the initial VTE prophylaxis (mechanical and/or pharmacological) was administered after hospital admission.<br>Patients are eligible for the numerator population when VTE Prophylaxis equals 1,2,3,5,6,7, or allowable value equals "yes" for Reason for No VTE Prophylaxis-Hospital Admission or "yes" for Reason for Oral Factor Xa Inhibitor and VTE Prophylaxis Date = 0 or 1. | | thromboembolism (VTE) prophylaxis documented in the medical record. Allowable values: 1 - 9 or A - None of the above, not documented or UTD.<br>6. VTE Prophylaxis Date - The month, day, and year that the initial VTE prophylaxis (mechanical and/or pharmacologic) was administered after hospital admission. |
| Denominator Statement | Ischemic or hemorrhagic stroke patients | All surgical patients aged 18 years and older undergoing procedures for which VTE prophylaxis is indicated in all patients | All discharged hospital inpatients |
| Denominator Details | Seven data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD. | Patients aged >= 18 years on date of encounter<br>AND<br>CPT surgical procedure code for which VTE prophylaxis is indicated:<br>0236T, 15734, 15830, 15832, 15833, 15834, 15835, 15836, 15837, 19260, 19271, 19272, 19300, 19301, 19302, 19303, 19304, 19305, 19306, 19307, 19316, 19318, 19324, 19361, 19364, 19366, 19367, 19368, 19369, 19380, 21346, 21347, 21348, 21422, 21423, 21432, | Eleven data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with VTE were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only - Physician/advanced |

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| | 4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>7. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A, Table 8.1 or Table 8.2. | 21433, 21435, 21436, 21454, 21461, 21462, 21465, 21470, 21627, 21632, 21740, 21750, 21805, 21825, 22551, 22554, 22558, 22600, 22612, 22630, 22633, 27080, 27125, 27130, 27132, 27134, 27137, 27138, 27158, 27202, 27235, 27236, 27244, 27245, 27269, 27280, 27282, 27440, 27441, 27442, 27443, 27445, 27446, 27447, 27880, 27881, 27882, 27884, 27886, 27888, 31360, 31365, 31367, 31368, 31370, 31375, 31380, 31382, 31390, 31395, 31760, 31766, 31770, 31775, 31786, 31805, 32096, 32097, 32098, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32505, 32506, 32507, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 33361, 33362, 33363, 33364, 33365, 33366, 33877, 33880, 33881, 33883, 33886, 33889, 33891, 34051, 34800, 34802, 34803, 34804, 34805, 34812, 34820, 34825, 34830, 34831, 34832, 34833, 34834, 34841, 34842, 34843, 34844, 34845, 34846, 34847, 34848, 34900, 35011, 35013, 35021, 35081, 35082, 35091, 35092, 35102, 35103, 35131, 35141, 35142, 35151, 35152, 35206, 35211, 35216, 35241, 35246, 35266, 35271, 35276, 35301, 35311, 35363, 35371, 35372, 35460, 35512, 35521, 35522, 35523, 35525, 35526, 35533, 35537, 35538, 35539, 35540, 35556, 35558, 35565, 35566, 35570, 35571, 35572, 35583, 35585, 35587, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35632, 35633, 35634, 35636, 35637, 35638, 35642, 35645, 35646, 35647, 35650, 35654, 35656, 35661, 35663, | practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as “palliative care” in the medical community and “comfort care” by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient's family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, no heroic measure. Allowable values represent the earliest physician/APN/PA documentation: Day 0 or 1, Day 2 or after, Timing unclear or Not Documented/UTD.<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the diagnosis for this hospitalization.<br>7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>8. ICD-9-CM Principal Procedure Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.<br>9. ICU Admission or Transfer Date - The day, month |

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| | | 35665, 35666, 35671, 36830, 37224, 37225, 37226, 37227, 37228, 37229, 37230, 37231, 37616, 37617, 38100, 38101, 38115, 38120, 38381, 38571, 38572, 38700, 38720, 38724, 38746, 38747, 38760, 38765, 38770, 38780, 39000, 39010, 39200, 39220, 39501, 39540, 39541, 39545, 39560, 39561, 41130, 41135, 41140, 41145, 41150, 41153, 41155, 43020, 43030, 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116, 43117, 43118, 43121, 43122, 43123, 43124, 43130, 43135, 43279, 43280, 43281, 43282, 43300, 43305, 43310, 43312, 43313, 43314, 43320, 43325, 43327, 43328, 43330, 43331, 43332, 43333, 43334, 43335, 43336, 43337, 43340, 43341, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496, 43500, 43501, 43502, 43510, 43520, 43605, 43610, 43611, 43620, 43621, 43622, 43631, 43632, 43633, 43634, 43640, 43641, 43644, 43645, 43651, 43652, 43653, 43770, 43771, 43772, 43773, 43774, 43800, 43810, 43820, 43825, 43830, 43832, 43840, 43843, 43845, 43846, 43847, 43848, 43850, 43855, 43860, 43865, 43870, 43880, 43886, 43887, 43888, 44005, 44010, 44020, 44021, 44025, 44050, 44055, 44110, 44111, 44120, 44125, 44126, 44127, 44130, 44140, 44141, 44143, 44144, 44145, 44146, 44147, 44150, 44151, 44155, 44156, 44157, 44158, 44160, 44180, 44186, 44187, 44188, 44202, 44204, 44205, 44206, 44207, 44208, 44210, 44211, 44212, 44227, 44300, 44310, 44312, 44314, 44316, 44320, 44322, 44340, 44345, 44346, 44602, 44603, 44604, 44605, 44615, 44620, 44625, 44626, 44640, 44650, 44660, 44661, 44680, 44700, 44800, | and year that the order was written for the patient to be directly admitted or transferred (from a lower level of care) to the intensive care unit (ICU).<br>10. ICU Admission or Transfer - Documentation that the patient was admitted or transferred to the intensive care unit (ICU) at this hospital. The definition of an ICU for the purpose of the measures noted above is that used by the CDC in the NHSN Patient Safety Project. An intensive care unit can be defined as a nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill. An ICU excludes nursing areas that provide step-down, intermediate care or telemetry only and specialty care areas. Allowable values: Yes, No, or UTD.<br>11. ICU Discharge Date - The day, month and year that the order was written to discharge the patient from the intensive care unit (ICU), left against medical advice (AMA) or expired. |

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| | | 44820, 44850, 44900, 44950, 44955, 44960, 44970, 45000, 45020, 45100, 45108, 45110, 45111, 45112, 45113, 45114, 45116, 45119, 45120, 45121, 45123, 45126, 45130, 45135, 45136, 45150, 45160, 45171, 45172, 45190, 45395, 45397, 45400, 45402, 45500, 45505, 45540, 45541, 45550, 45560, 45562, 45563, 45800, 45805, 45820, 45825, 46715, 46716, 46730, 46735, 46740, 46742, 46744, 46746, 46748, 46750, 46751, 46753, 46754, 46760, 46761, 46762, 47010, 47015, 47100, 47120, 47122, 47125, 47130, 47135, 47136, 47140, 47141, 47142, 47300, 47350, 47360, 47361, 47362, 47370, 47371, 47380, 47381, 47382, 47400, 47420, 47425, 47460, 47480, 47500, 47505, 47560, 47561, 47562, 47563, 47564, 47570, 47600, 47605, 47610, 47612, 47620, 47630, 47700, 47701, 47711, 47712, 47715, 47720, 47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47801, 47802, 47900, 48000, 48001, 48020, 48100, 48102, 48105, 48120, 48140, 48145, 48146, 48148, 48150, 48152, 48153, 48154, 48155, 48500, 48510, 48520, 48540, 48545, 48547, 48548, 48554, 48556, 49000, 49002, 49010, 49020, 49040, 49060, 49203, 49204, 49205, 49215, 49220, 49250, 49255, 49320, 49321, 49322, 49323, 49505, 49507, 49560, 49561, 49565, 49566, 49570, 50020, 50220, 50225, 50230, 50234, 50236, 50240, 50320, 50340, 50360, 50365, 50370, 50380, 50543, 50545, 50546, 50547, 50548, 50715, 50722, 50725, 50727, 50728, 50760, 50770, 50780, 50782, 50783, 50785, 50800, 50810, 50815, 50820, 50947, 50948, 51550, 51555, 51565, 51570, 51575, 51580, 51585, 51590, 51595, 51596, 51597, 51800, | |

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| | | 51820, 51900, 51920, 51925, 51960, 55810, 55812, 55815, 55821, 55831, 55840, 55842, 55845, 55866, 56630, 56631, 56632, 56633, 56634, 56637, 56640, 57267, 58150, 58152, 58180, 58200, 58210, 58240, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290, 58291, 58292, 58293, 58294, 58951, 58953, 58954, 58956, 60200, 60210, 60212, 60220, 60225, 60240, 60252, 60254, 60260, 60270, 60271, 60280, 60281, 60500, 60502, 60505, 60520, 60521, 60522, 60540, 60545, 60600, 60605, 60650, 61312, 61313, 61315, 61510, 61512, 61518, 61520, 61526, 61530, 61548, 61591, 61595, 61596, 61598, 61606, 61616, 61618, 61619, 61697, 61700, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63046, 63047, 63056, 63075, 63081, 63267, 63276, 64746, 69720, 69955, 69960, 69970 | |
| Exclusions | • Less than 18 years of age<br>• Length of Stay < 2 days<br>• Length of Stay > 120 days<br>• Comfort measures only documented on day of or day after hospital arrival<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention | This measure was developed using the PCPI exception methodology which uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For this measure, exceptions may include medical reason(s). Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons | • Patients less than 18 years of age<br>• Patients who have a length of stay (LOS) less than two days and greater than 120 days<br>• Patients with Comfort Measures Only documented on day of or day after hospital arrival<br>• Patients enrolled in clinical trials related to VTE<br>• Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS greater than or equal to one day<br>• Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke as defined in Appendix A, Table 7.01, 8.1 or 8.2<br>• Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03 or 7.04<br>• Patients with ICD-9-CM Principal Procedure Code of |

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| | | for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.<br>Documentation of medical reason(s) for patient not receiving any form of VTE prophylaxis (LMWH, LDUH, adjusted-dose warfarin, fondaparinux or mechanical prophylaxis) within 24 hours prior to incision time or 24 hours after surgery end time | Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24 |
| Exclusion Details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days or greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients with ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient was admitted for the elective performance of this procedure are excluded. | Report CPT Category II code with modifier: 4044F-1P – Documentation of medical reason(s) for patient not receiving any form of VTE prophylaxis (LMWH, LDUH, adjusted-dose warfarin, fondaparinux or mechanical prophylaxis) within 24 hours prior to incision time or 24 hours after surgery end time | • The patient age in years is equal to the Admission Date minus the Birthdate. Patients less than 18 years are excluded.<br>• Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days or equal to or less than 2 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• The data element ICU Admission or Transfer is used to determine if the patient was admitted to the ICU. If "Yes" is selected, the case flows to the ICU Admission or Transfer Date. If the ICU Admission or Transfer Date is equal to the hospital admission or the ICU Admission or Transfer Date is the day after the hospital admission date, the ICU Admission and ICU Discharge Date are used to determine if the patient was in the ICU for one or more days. If the LOS is less than one day, the patient is excluded from VTE-1. In addition, if the patient's ICU Admission |

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| | | | Date is prior to the hospital admission day, the patient is excluded (direct admit to ICU).<br>• Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke are excluded.<br>• Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE are excluded.<br>• Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries are excluded. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>Not applicable |
| Stratification | Not applicable, the measure is not stratified. | We encourage the results of this measure to be stratified by race, ethnicity, primary language, and administrative sex. | Not Applicable, the measure is not stratified. |
| Type Score | Rate/proportion better quality = higher score | | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial. | To calculate performance rates:<br>1) Find the patients who meet the initial population (ie, the general group of patients that the performance measure is designed to address).<br>2) From the patients within the initial population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial population and denominator are identical.<br>3) From the patients within the denominator, find the patients who qualify for the numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal | 1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>3. Check Length of Stay<br>a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to ICD-9-CM Principal Diagnosis Code.<br>4. Check ICD-9-CM Principal Diagnosis Code<br>a. If the ICD-9-CM Principal Diagnosis Code is on |

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| | 3. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>4. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Length of Stay calculation.<br>5. Calculate the Length of Stay (LOS). Length of Stay, in days, is equal to the Discharge Date minus the Admission Date.<br>6. Check Length of Stay (LOS)<br>a. If the Length of Stay is greater than or equal to zero and less than 2, the case will proceed to a Measure Category Assignment of B and will not be in the | to the number of patients in the denominator.<br>4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for denominator exception when exceptions have been specified [for this measure: medical reason(s)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation.<br>Although exception cases are removed from the denominator population for the performance calculation, the number of patients with valid exceptions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.<br>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure. | Table 7.01, 8.1, or 8.2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-9-CM Principal Diagnosis Code is not on Table 7.01, 8.1, or 8.2, continue processing and proceed to ICD-9-CM Principal or Other Diagnosis Code.<br>5. Check ICD-9-CM Principal or Other Diagnosis Code<br>a. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, continue processing and proceed to ICD-9-CM Principal Procedure Code.<br>6. Check ICD-9-CM Principal Procedure Code<br>a. If the ICD-9-CM Principal Procedure Code is on Table 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-9-CM Principal Procedure Code is missing or not on Table 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, continue processing and proceed to Comfort Measures Only.<br>7. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop |

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| | Measure Population. Stop processing.<br>b. If the Length of Stay is greater than or equal to 2, continue processing and proceed to VTE Prophylaxis.<br>7. Check VTE Prophylaxis<br>a. If VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If VTE Prophylaxis equals A only, continue processing and proceed to Reason for No VTE Prophylaxis-Hospital Admission.<br>c. If VTE Prophylaxis equals 1, 2, 3, 4, 5, 6, 7, 8 or 9, continue processing and proceed to step 9 and recheck VTE Prophylaxis.<br>8. Check Reason for No VTE Prophylaxis-Hospital Admission<br>a. If Reason for No VTE Prophylaxis-Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for No VTE Prophylaxis-Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Reason for No VTE Prophylaxis-Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>9. Recheck VTE Prophylaxis | | processing.<br>c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.<br>8. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to ICU Admission or Transfer.<br>9. Check ICU Admission or Transfer<br>a. If ICU Admission or Transfer is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICU Admission or Transfer is equal to 2 or 3, continue processing and proceed to step 16 and check VTE Prophylaxis.<br>c. If ICU Admission or Transfer is equal to 1, continue processing and proceed to ICU Admission or Transfer Date.<br>10. Check ICU Admission or Transfer Date<br>a. If ICU Admission or Transfer Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICU Admission or Transfer Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If ICU Admission or Transfer Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial ICU Day calculation.<br>11. Calculate Initial ICU Day. Initial ICU Day, in days, is |

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| | a. If none of the VTE Prophylaxis equals 1, 2, 3, 5, 6 or 7, continue processing and recheck VTE Prophylaxis.<br>b. If any VTE Prophylaxis equals 1, 2, 3, 5, 6 or 7, continue processing and proceed to step 13 and check VTE Prophylaxis Date.<br>10. Recheck VTE Prophylaxis<br>a. If VTE Prophylaxis is not equal to 8, continue processing and proceed to Reasons for No VTE Prophylaxis-Hospital Admission.<br>b. If any of VTE Prophylaxis equals 8, continue processing and proceed to step 12 and check Reason for Oral Factor Xa Inhibitor.<br>11. Check Reason for No VTE Prophylaxis-Hospital Admission<br>a. If Reason for No VTE Prophylaxis-Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for No VTE Prophylaxis-Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Reason for No VTE Prophylaxis-Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>12. Check Reason for Oral Factor Xa Inhibitor | | equal to ICU Admission or Transfer Date minus Admission Date.<br>12. Check Initial ICU Day<br>a. If the Initial Day is less than 0 days, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the Initial Day is equal to 0 days or 1 day, the case will proceed to ICU Discharge Date.<br>c. If the Initial Day is greater than or equal to 2 days, continue processing and proceed to step 16 and check VTE Prophylaxis.<br>13. Check ICU Discharge Date<br>a. If the ICU Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the ICU Discharge Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the ICU Discharge Date equals a Non Unable to Determine Value, continue processing and proceed to the ICU LOS calculation.<br>14. Calculate ICU LOS. ICU LOS is equal to ICU Discharge Date minus ICU Admission or Transfer Date.<br>15. Check ICU LOS<br>a. If ICU LOS is less than zero days, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If ICU LOS is greater than or equal to 1 day, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. |

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| | a. If Reason for Oral Factor Xa Inhibitor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Oral Factor Xa Inhibitor equals Yes, continue processing and proceed to VTE Prophylaxis Date.<br>c. If Reason for Oral Factor Xa Inhibitor equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>13. Check VTE Prophylaxis Date<br>a. If VTE Prophylaxis Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If VTE Prophylaxis Date equals Unable to Determine (UTD), the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the VTE Prophylaxis Date equals a Non-Unable To Determine (non-UTD) Value, continue processing and proceed to VTE Prophylaxis Day calculation.<br>14. Calculate VTE Prophylaxis Day. The VTE Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus the Admission Date.<br>15. Check VTE Prophylaxis Day<br>a. If the VTE Prophylaxis Day is equal to zero or 1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop | | c. If ICU LOS is equal to zero days, continue processing and proceed to VTE Prophylaxis.<br>16. Check VTE Prophylaxis<br>a. If VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If VTE Prophylaxis is only equal to A or only equal to 9, continue processing and proceed to check Reason for No VTE Prophylaxis – Hospital Admission.<br>1. If Reason for No VTE Prophylaxis - Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>2. If Reason for No VTE Prophylaxis – Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>3. If Reason for No VTE Prophylaxis - Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If any VTE Prophylaxis is equal to 1,2,3,4,5,6,7 or 8, continue processing and proceed to recheck VTE Prophylaxis.<br>17. Recheck VTE Prophylaxis<br>a. If VTE Prophylaxis is only equal to 8 or equal to 8 and 9, continue processing and proceed to check Reason for Oral Factor Xa Inhibitor.<br>1. If Reason for Oral Factor Xa Inhibitor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>2. If Reason for Oral Factor Xa Inhibitor equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure |

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| | processing.<br>b. If the VTE Prophylaxis Day is greater than or equal to 2, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the VTE Prophylaxis Day is less than 0, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. Available at measure-specific web page URL identified in S.1 | | Population. Stop processing.<br>3. If Reason for Oral Factor Xa Inhibitor equals Yes, the case will proceed to check VTE Prophylaxis Date.<br>b. If any VTE Prophylaxis is equal to 1,2,3,4,5,6, or 7, continue processing and proceed to check VTE Prophylaxis Date.<br>18. Check VTE Prophylaxis Date<br>a. If the VTE Prophylaxis Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the VTE Prophylaxis Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the VTE Prophylaxis Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial Prophylaxis Day calculation.<br>19. Calculate Initial Prophylaxis Day. Initial Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus the Admission Date.<br>20. Check Initial Prophylaxis Day<br>a. If Initial Prophylaxis Day is less than zero days, the case will proceed to a Measure category Assignment of X and will be rejected. Stop processing.<br>b. If Initial Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Initial Prophylaxis Day is greater than or equal to 2 days, continue processing and proceed to Surgical Procedure.<br>21. Check Surgical Procedure<br>a. If Surgical Procedure is missing, the case will proceed to a Measure Category Assignment of X and |

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| | | | will be rejected. Stop processing.<br>b. If Surgical Procedure equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If Surgical Procedure equals Yes, continue processing and proceed to Surgery End Date.<br>22. Check Surgery End Date<br>a. If the Surgery End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If the Surgery End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>c. If the Surgery End Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial Surgical Prophylaxis Day calculation.<br>23. Calculate Initial Surgical Prophylaxis Day. Initial Surgical Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus Surgery End Date.<br>24. Check Initial Surgical Prophylaxis Day<br>a. If the Initial Surgical Prophylaxis Day is greater than or equal to 2 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>b. If the Initial Surgical Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If the Initial Surgical Prophylaxis Day is less than 0 days, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. |
| Submission | 5.1 Identified measures: 0372 : Intensive | | 5.1 Identified measures: 0239 : Perioperative Care: |

| | 0434: STK-01: Venous Thromboembolism (VTE) Prophylaxis | 0239: Perioperative Care: Venous Thromboembolism (VTE) Prophylaxis | 0371: Venous Thromboembolism Prophylaxis |
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| items | Care Unit Venous Thromboembolism Prophylaxis<br>0371 : Venous Thromboembolism Prophylaxis<br>0239 : Perioperative Care: Venous Thromboembolism (VTE) Prophylaxis<br>0218 : Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures NQF# 0371 and NQF# 0372 are Venous Thromboembolism (VTE) measures which specifically exclude the stroke population. The measures are completely harmonized in terms of measure specifications and data element definitions; NQF# 0218 addresses the surgical population only, and therefore do not apply to stroke patients. Common data elements with this measure have been completely harmonized. Measure 0239 is a physician performance measure with a targeted population of surgical patients identified through CPT codes and thus is a different level of measurement. This measure evaluates physician practice as opposed to hospital processes.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable | | Venous Thromboembolism (VTE) Prophylaxis<br>0217 : Surgery Patients with Recommended Venous Thromboembolism (VTE) Prophylaxis Ordered<br>0218 : Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0217, 0218, are SCIP measures (Surgical Care Improvement Project). They are part of the Centers for Medicare & Medicaid Services/The Joint Commission aligned measures relatingto the administration of VTE prophylaxis for hospital inpatients and are harmonized with 0371 to the extent that the measures utilize some of the same data elements. The target population for 0217 and 0218 is surgical inpatients within a select group of surgical procedures. The target population for 0371 differs in that it includes all hospitalized patients with the exception of those captured in measures 0217 and 0218. Measure 0239 is a physician performance measure with a targeted population of surgical patients identified through CPT codes and could extend to the outpatient setting. This measure evaluates physician practice as opposed to hospital processes.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable |

**Comparison of NQF #0436 and #1525**

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| Steward | The Joint Commission | American College of Cardiology |
| Description | This measure captures the proportion of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. | Percentage of patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification, who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism |
| Type | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635882183961489008.xls | Electronic Clinical Data : Registry See 'Registry Supplemental Resources' attached in appendix field A.1.<br>Available in attached appendix at A.1 No data dictionary |
| Level | Facility, Population : National | Clinician : Individual |
| Setting | Hospital/Acute Care Facility | Ambulatory Care : Clinician Office/Clinic |
| Numerator Statement | Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge | Patients who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism |
| Numerator Details | One data element is used to calculate the numerator:<br>• Anticoagulation Therapy Prescribed at Discharge – Documentation that anticoagulation therapy was prescribed at hospital discharge. Allowable values: Yes, No/UTD or unable to determine from medical record documentation. | For the purposes of this measure, anticoagulant therapy is considered to be the following medications: warfarin, dabigatran, rivaroxaban, apixaban<br>See 'Registry Supplemental Resources' attached in appendix field A.1. |

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| | Patients are eligible for the numerator population when the allowable value equals "yes" for the data element. | |
| Denominator Statement | Ischemic stroke patients with documented atrial fibrillation/flutter. | All patients aged 18 years and older with a diagnosis of nonvalvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification |
| Denominator Details | Ten data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Atrial Fibrillation/Flutter – Documentation that the patient has a history of any atrial fibrillation (e.g., remote, persistent, or paroxysmal) or atrial flutter in the past OR current atrial fibrillation or flutter on EKG.<br>Allowable values: Yes or No/UTD.<br>3. Birthdate - The month, day and year the patient was born.<br>4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>5. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>6. Discharge Date – The month, day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>7. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>8. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).<br>Allowable values: Yes or No/UTD.<br>9. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD- | The assessment of patients with nonvalvular AF for thromboembolic risk factors should include the following criteria:<br>[Risk Factors] [Weighting]<br>Prior Stroke, TIA, or Systemic Embolism High Risk<br>Age >= 75 Years Moderate Risk<br>Hypertension Moderate Risk<br>Diabetes Mellitus Moderate Risk<br>Heart Failure or Impaired Left Ventricular Systolic Function Moderate Risk<br>See 'Registry Supplemental Resources' attached in appendix field A.1.<br>For the denominator ?<br>Atrial Flutter:<br>ICD-9-CM: 427.32<br>ICD-10-CM: I48.1<br>SNOMED-CT: 5370000, 195080001, 425615007, 427665004<br>Atrial Fibrillation:<br>ICD-9-CM: 427.31<br>ICD-10-CM: I48.0<br>SNOMED-CT: 7141000047109, 49436004, 195080001, 233910005, 233911009, 282825002, 314208002, 426749004, 440028005, 440059007<br>Encounters:<br>CPT: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245<br>SNOMED-CT: 4525004, 12843005, 18170008, 19681004, 87790002, 90526000, 185349003, 185463005, 185465003, |

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| | 10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>10. Reason For Not Prescribing Anticoagulation Therapy at Discharge – Documentation of a reason for not prescribing anticoagulation therapy at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1, and patients with documented Atrial Fibrillation/Flutter. | 207195004, 270427003, 270430005, 308335008, 390906007, 406547006, 439708006 |
| Exclusions | • Less than 18 years of age<br>• Length of Stay > 120 days<br>• Comfort measures only documented<br>• Enrolled in clinical trials related to stroke<br>• Admitted for elective carotid intervention<br>• Discharged to another hospital<br>• Left against medical advice<br>• Expired<br>• Discharged to home for hospice care<br>• Discharged to a health care facility for hospice care<br>• Documented reason for not prescribing anticoagulation therapy at discharge | Denominator Exclusions:<br>•Patients with mitral stenosis or prosthetic heart valves<br>•Patients with transient or reversible causes of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery)<br>Denominator Exceptions:<br>Documentation of medical reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, allergy, risk of bleeding, other medical reason)<br>Documentation of patient reason(s) for not prescribing warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism (eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason) |
| Exclusion Details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients are excluded with the following ICD-10-PCS procedure codes for carotid intervention procedures as identified in Appendix A, Table 8.3, if medical record documentation states that the patient | The ACCF, AHA, and PCPI distinguish between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision. For measure 1525, exclusions include patients with mitral stenosis or prosthetic heart valves, and patients with transient or reversible causes of AF (eg, pneumonia, hyperthyroidism, pregnancy, cardiac surgery). Exclusions, including applicable value sets, are included in the measure specifications.<br>Measure Exceptions |

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| | was admitted for the elective performance of this procedure.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Anticoagulation Therapy. | Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences. The ACCF, AHA, PCPI exception methodology uses three categories of exception reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure 1525, exceptions may include medical reason(s) (eg, allergy, risk of bleeding, other medical reason) or patient reason(s) (eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason). Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement.<br>Additional details are included in 'Registry Supplemental Resources' attached in appendix field A.1. |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification<br>No risk adjustment or risk stratification. |
| Stratification | Not applicable, the measure is not stratified. | We encourage the results of this measure be stratified by race, ethnicity, administrative sex, and payer, consistent with the data elements collected by the Pinnacle Registry. |
| Type Score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code | To calculate performance rates:<br>1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address). |

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| | a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only<br>a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure | 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator. (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.<br>3) Find the patients who quality for exclusions and subtract from the denominator.<br>4) From the patients within the denominator (after exclusions have been subtracted from the denominator), find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator<br>5) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s)(eg, allergy, risk of bleeding, other medical reason) or patient reason(s)(eg, economic, social, and/or religious impediments, noncompliance, patient refusal, other patient reason)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage of patients with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.<br>If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.<br>For calculation algorithm, see 'Registry Supplemental Resources' attached in appendix field A.1. Available in attached appendix at A.1 |

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| | population. Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Atrial Fibrillation/Flutter.<br>7. Check Atrial Fibrillation/Flutter.<br>a. If Atrial Fibrillation/Flutter is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Atrial Fibrillation/Flutter equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Atrial Fibrillation/Flutter equals Yes, continue processing and check Anticoagulation Therapy Prescribed at Discharge.<br>8. Check Anticoagulation Therapy Prescribed at Discharge.<br>a. If Anticoagulation Therapy Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Anticoagulation Therapy Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.<br>c. If Anticoagulation Therapy Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Anticoagulation Therapy at Discharge.<br>9. Check Reason for Not Prescribing Anticoagulation Therapy at Discharge.<br>a. If Reason for Not Prescribing Anticoagulation Therapy at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Anticoagulation Therapy at Discharge equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Reason for Not Prescribing Anticoagulation Therapy at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.<br>Available at measure-specific web page URL identified in S.1 | |

| | 0436: STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter | 1525: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy |
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| Submission items | 5.1 Identified measures: 0084 : Heart Failure (HF) : Warfarin Therapy Patients with Atrial Fibrillation<br>0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge<br>0624 : Atrial Fibrillation - Anticoagulation Therapy<br>1525 : Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 1525 from the American College of Cardiology is a physician performance measure identified through CPT codes and could extend to the outpatient setting. The measure evaluates physician practice as opposed to hospital processes. The target population for measure 1525 differs from measure 0436 Anticoagulation Therapy for Atrial Fibrillation/Flutter in that it includes in the denominator population all patients age 18 years and older with a diagnosis of nonvalvular atrial fibrillation or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high-risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification. It is not specified for ischemic stroke patients with atrial fibrillation/flutter only.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable | 5.1 Identified measures: 0241 : Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation (AF) at Discharge<br>0436 : STK-03: Anticoagulation Therapy for Atrial Fibrillation/Flutter<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0241 and 0436 focus on the provision of anticoagulant therapy in patients hospitalized with stroke who also have atrial fibrillation. These measures focus on secondary prevention of stroke, while our measure focuses on the primary prevention of stroke.<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable, no competing measures. |

**Comparison of NQF #0439, #0068, #0545, #0074, #0118 and #1519**

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| Steward | The Joint Commission | National Committee for Quality Assurance | Centers for Medicare & Medicaid Services | American College of Cardiology | The Society of Thoracic Surgeons | Society for Vascular Surgery |
| Description | This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge. This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK- | The percentage of patients 18 years of age and older who were discharged from an inpatient setting with an acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had documentation of routine use of aspirin or another antiplatelet during the measurement | The measure addresses adherence to statins. The measure is reported as the percentage of eligible individuals with diabetes mellitus who had at least two prescriptions for statins and who have a Proportion of Days Covered (PDC) of at least 0.8 during the measurement period (12 consecutive months). | Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who have a LDL-C result <100 mg/dL OR patients who have a LDL-C result >=100 mg/dL and have a documented plan of care to achieve LDL-C <100mg/dL, including at a minimum the prescription of a statin | Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on a lipid lowering statin | Percentage of patients aged 18 years and older undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge. This measure is proposed for both hospitals and individual providers. |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | 8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. | year. | | | | |
| Type | Process | Process | Process | Process | Process | Process |
| Data Source | Electronic Clinical Data, Paper Medical Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records N/A<br>No data collection instrument provided Attachment 0068_IVD_Value_Sets_Final.xlsx | Administrative claims, Other, Electronic Clinical Data : Pharmacy For measure calculation, the following Medicare files were required:<br>• Denominator tables<br>• Prescription drug benefit (Part D) coverage tables<br>• Beneficiary file<br>• Institutional claims (Part A)<br>• Non-institutional claims (Part B)—physician carrier/non-DME | Electronic administrative data/claims, Electronic Clinical Data, Electronic Health/Medical Record, Registry data This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.<br>URL Attachment PCPI_CAD-2_LipidControl NQF 0074.pdf | Electronic Clinical Data : Registry STS Adult Cardiac Surgery Database Version 2.73; STS Adult Cardiac Surgery Database Version 2.8 went live on July 1, 2014.<br>Available at measure-specific web page URL identified in S.1 No data dictionary | Electronic Clinical Data : Registry The Society for Vascular Surgery Vascular Quality Initiative Registry<br>The Vascular Study Group of New England Registry<br>Attachment LEB defs v.01.09.doc |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.<br>No data collection instrument provided Attachment Appendix_A.1-635878758534627046.xls | | • Prescription drug benefit (Part D) claims<br>For ACO attribution, the following were required:<br>• Denominator tables for Parts A and B enrollment<br>• Prescription drug benefit (Part D) coverage tables<br>• Beneficiary file<br>• Institutional claims (Part A)<br>• Non-institutional claims (Part B)—physician carrier/non-DME<br>• Prescription drug benefit (Part D) claims<br>For physician group attribution, the following were required:<br>• Non-institutional claims (Part B)—physician carrier/non-DME<br>• Denominator | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | tables to determine individual enrollment<br>• Beneficiary file or coverage table to determine hospice benefit and Medicare as secondary payor status<br>• CMS physician and physician specialty tables<br>• National Plan & Provider Enumeration System (NPPES) database<br>No data collection instrument provided Attachment NQF0545_-_Codes_Table_-_statins.xls | | | |
| Level | Facility, Population : National | Clinician : Group/Practice, Clinician : Individual | Clinician : Group/Practice, Health Plan, Integrated Delivery System, Population : State | Clinicians : Group, Clinicians : Individual | Facility, Clinician : Group/Practice | Facility, Clinician : Group/Practice, Clinician : Individual |
| Setting | Hospital/Acute Care Facility | Ambulatory Care : Clinician Office/Clinic | Ambulatory Care : Clinician Office/Clinic | Assisted Living, Ambulatory Care : Clinic, Group homes, | Hospital/Acute Care Facility | Hospital/Acute Care Facility |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | | Home, Ambulatory Care : Hospital Outpatient, Nursing home (NH) /Skilled Nursing Facility (SNF), Ambulatory Care : Office | | |
| Numerator Statement | Ischemic stroke patients prescribed statin medication at hospital discharge | Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year. | Individuals in the denominator with at least two prescriptions for statins with a PDC of at least 0.8 for statins. | Patients who have a LDL-C result <100 mg/dL<br>OR<br>Patients who have a LDL-C result >=100 mg/dL and have a documented plan of care1 to achieve LDL-C <100 mg/dL, including at a minimum the prescription of a statin within a 12 month period<br>Definitions:<br>*Documented plan of care may also include: documentation of discussion of lifestyle modifications (diet, exercise); scheduled re-assessment of LDL-C | Number of patients undergoing isolated CABG who were discharged on a lipid lowering statin | Patients undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge. |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | | *Prescribed may include prescription given to the patient for a statin at one or more visits in the measurement period OR patient already taking a statin as documented in current medication list<br>Numerator Instructions:<br>The first numerator option can be reported for patients who have a documented LDL-C < 100 mg/dL at any time during the measurement period. | | |
| Numerator Details | One data element is used to calculate the numerator:<br>• Statin Medication Prescribed at Discharge – Documentation that a statin medication was prescribed at hospital discharge. | ADMINISTRATIVE<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Refer to Table IVD-E to identify | The numerator is defined as individuals with a PDC of 0.8 or greater.<br>The PDC is calculated as follows:<br>• PDC Numerator: The PDC numerator is the sum of the | See attached for EHR Specifications.<br>For Claims/Administrative: Report CPT II Code Patients who have LDL-C <100 mg/dL 3048F Most recent LDL-C <100 mg/dL<br>OR | Number of isolated CABG procedures in which discharge lipid lowering medication [DCLipid (STS Adult Cardiac Surgery Database Version 2.73)] is marked "yes" and lipid lowering discharge | ANY registry that includes anatomic details or CPT procedure codes is required to identify patients for numerator inclusion. The Society for Vascular Surgery Vascular Quality |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | Allowable values: Yes, No/UTD or unable to determine from medical record documentation.<br>Patients are eligible for the numerator population when the allowable value equals “yes” for the data element. | medications for oral anti-platelet therapy.<br>ORAL ANTI-PLATELET THERAPIES (TABLE IVD-E)<br>PRESCRIPTIONS<br>- Aspirin<br>- Clopidogrel<br>- Aspirin-dipyridamole<br>- Prasugrel<br>- Ticagrelor<br>- Ticlopidine<br>---<br>MEDICAL RECORD<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>At a minimum, documentation in the medical record must include a note indicating the date when aspirin or another antiplatelet was prescribed or documentation of | days covered by the days’ supply of all drug claims in each respective drug class. The period covered by the PDC starts on the day the first prescription is filled (index date) and lasts through the end of the measurement period, or death, whichever comes first. For prescriptions with a days’ supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period. If there are prescriptions for the same drug (generic name) on the same date of service, keep the prescription with the largest days’ | Patients who have LDL-C =100 mg/dL and have a documented plan of care to achieve LDL-C <100 mg/dL, including prescription of lipid-lowering therapy<br>• 3049F Most recent LDL-C 100-129 mg/dL<br>OR<br>• 3050F Most recent LDL-C greater than or equal to 130 mg/dL<br>AND<br>• 05XXF (code in development) Lipid lowering therapy plan of care documented<br>AND<br>• 4002F Statin therapy prescribed | medication type [DCLipMT (STS Adult Cardiac Surgery Database Version 2.73)] is marked "statin" | Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE)are examples of registries capture detailed anatomic information, but the measure is not limited to these registries.<br>Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external iliac artery and extending into the ipsilateral leg. It includes procedures with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. The numerator is calculated as the number of patients age 18 and over undergoing such a procedure who are prescribed a statin |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | prescription from another treating physician. | supply. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.<br>• PDC Denominator: The PDC denominator is the number of days from the first prescription date through the end of the measurement period, or death date, whichever comes first. | | | medication at the time of discharge, which is also captured in the above registries. |
| Denominator Statement | Ischemic stroke patients | Patients 18 years or older by the end of the measurement year discharged from an inpatient setting with an AMI, CABG, or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year | Individuals at least 18 years of age as of the beginning of the measurement period with diabetes mellitus and at least two prescriptions for statins during the measurement period (12 consecutive months). | All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period | All patients undergoing isolated CABG | All patients aged 18 years and older undergoing lower extremity bypass as defined above who are discharged alive, excluding those patients who are intolerant to statins. |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | prior to the measurement year. | | | | |
| Denominator Details | Nine data elements are used to calculate the denominator:<br>1. Admission Date – The month, day and year of admission to acute inpatient care.<br>2. Birthdate - The month, day and year the patient was born.<br>3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with stroke were being studied. Allowable values: Yes or No/UTD.<br>4. Comfort Measures Only – The earliest day the physician/APN/PA documented comfort measures only after hospital arrival.<br>Allowable values: 1 | ADMINISTRATIVE<br>Patients are identified for the eligible population in two ways: by event or by diagnosis. The organization must use both methods to identify the eligible population, but a patient only needs to be identified by one method to be included in the measure.<br>Event. Any of the following during the year prior to the measurement year meet criteria:<br>- MI. Discharged from an inpatient setting with an MI (MI Value Set)*. Use both facility and professional claims to identify MI.<br>-CABG. Discharged from an inpatient setting with a CABG | Target population meets the following conditions:<br>1. Continuously enrolled in Part D with no more than a one-month gap in enrollment during the measurement year;<br>2. Continuously enrolled in Part A and Part B with no more than a one-month gap in Part A enrollment and no more than a one-month gap in Part B enrollment during the measurement year; and,<br>3. No more than one month of HMO enrollment during the measurement year.<br>IDENTIFICATION OF DIABETES MELLITUS<br>Individuals with diabetes mellitus are | See attached for EHR Specifications.<br>For Claims/Administrative: See coding tables attached for coding (ICD-9-CM, ICD-10-CM, CPT) | Number of isolated CABG procedures excluding cases with an in-hospital mortality or cases for which discharge anti-lipid treatment use was contraindicated. The SQL code used to create the function used to identify cardiac procedures is provided in the Appendix. | ANY registry that includes anatomic details or CPT procedure codes is required to identify patients for denominator inclusion. The Society for Vascular Surgery Vascular Quality Initiative and the Vascular Study Group of New England are examples of registries that capture detailed anatomic information, but the measure is not limited to these registries. Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external iliac artery and extending into the ipsilateral leg. It includes procedures |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | (Day 0 or 1); 2 (Day 2 or after); 3 (Timing Unclear); 4 (Not Documented/UTD).<br>5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.<br>6. Discharge Disposition – The place or setting to which the patient was discharged on the day of hospital discharge.<br>7. Elective Carotid Intervention – Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting). | (CABG Value Set)*. Use both facility and professional claims to identify CABG.<br>-PCI. Patients who had a PCI (PCI Value Set)* in any setting.<br>Diagnosis. Patients who meet at least one of the following criteria during both the measurement year and the year prior to the measurement year. Criteria need not be the same across both years.<br>-At least one outpatient visit (Outpatient Value Set)* with an IVD diagnosis (IVD Value Set)*, or<br>-At least one acute inpatient encounter (Acute Inpatient Value Set)* with an IVD diagnosis (IVD Value Set)*.<br>*Due to the extensive volume of codes | identified using diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data.*<br>Individuals must have:<br>At least two encounters with a principal or secondary diagnosis of diabetes with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period;<br>OR<br>At least one encounter with a principal or secondary diagnosis of diabetes in an acute inpatient or emergency department setting during the | | | with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. Only patients who are discharged alive are included in the denominator, and patients who are intolerant to statins are excluded, as described below. |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | Allowable values: Yes or No/UTD.<br>8. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.<br>9. Reason For Not Prescribing Statin Medication at Discharge – Documentation of a reason for not prescribing a statin medication at discharge.<br>Allowable values: Yes or No/UTD.<br>Population: | associated with identifying the denominator for this measure, we are attaching a separate file with code value sets. See code value sets located in question S.2b.<br>---<br>MEDICAL RECORD<br>Documentation of IVD in the medical record includes:<br>- IVD<br>- Ischemic heart disease<br>- Angina<br>- Coronary atherosclerosis<br>- Coronary artery occlusion<br>- Cardiovascular disease<br>- Occlusion or stenosis of precerebral arteries (including basilar, carotid and vertebral arteries)<br>- Atherosclerosis of | measurement period;<br>OR<br>At least one ambulatory prescription claim for insulin or other oral diabetes medication dispensed during the measurement period.<br>*Adapted from NCQA HEDIS 2012 (2012). Note: HEDIS uses a look-back period of one year for both the prescription data and diagnosis.<br>Table 1. Codes Used to Identify Diabetes Mellitus Diagnosis<br>ICD-9-CM: 250.xx, 357.2, 362.01, 362.02, 362.03, 362.04, 362.05, 362.06, 362.07, 366.41, 648.00, 648.01, 648.02, 648.03, 648.04<br>ICD-10-CM: E08.311, | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | Discharges with ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 8.1. | renal artery<br>- Atherosclerosis of native arteries of the extremities<br>- Chronic total occlusion of artery of the extremities<br>- Arterial embolism and thrombosis<br>- Atheroembolism.<br>Note: Use paper logs, patient registries or electronic medical records (EMRs) to identify the denominator, then use the medical record to confirm patient eligibility. | E08.319, E08.321, E08.329, E08.331, E08.339, E08.341, E08.349, E08.351, E08.359, E08.40, E08.42, E09.311, E09.319, E09.321, E09.329, E09.331, E09.339, E09.341, E09.349, E09.351, E09.359, E09.36, E09.40, E09.42, E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E10.36, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351, E13.359, E13.36, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, | | | |

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| | | | E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9, O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.311, O24.312, O24.313, O24.319, O24.32, O24.33, O24.811, O24.812, O24.813, O24.819, O24.82, O24.83, O24.911, O24.912, O24.913, O24.919, O24.92, O24.93<br>DRG: 637,638<br>Codes Used to Identify Encounter Type<br>Table 2.1. Outpatient Setting<br>CPT: 92002, 92004, 92012, 92014, 99201-99205, 99211-99215, 99217-99220, | | | |

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| | | | 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456<br>UB-92 revenue: 051x, 0520-0523, 0526-0529, 057x-059x, 077x, 082x-085x, 088x, 0982, 0983<br>Table 2.2 Non-Acute Inpatient<br>CPT: 99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337<br>UB-92 revenue: 0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x<br>Table 2.3 Acute Inpatient<br>CPT: 99221-99223, 99224-99226, 99231-99233, 99238, 99239, 99251-99255, 99291 | | | |

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| | | | UB-92 revenue: 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987<br>Table 2.4 Emergency Department<br>CPT: 99281-99285<br>UB-92 revenue: 045x, 0981<br>The following are the diabetic medications by class for the denominator. The route of administration includes all oral and injectable formulations of the medications listed below.<br>Table 3. Codes Used to Identify Diabetic Individuals<br>Alpha-glucosidase inhibitors:<br>acarbose<br>miglitol | | | |

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| | | | Anti-diabetic amylin analogs:<br>pramlintide<br>Anti-diabetic combinations:<br>alogliptin-metformin<br>alogliptin-pioglitazone<br>glipizide-metformin<br>glyburide-metformin<br>pioglitazone-glimepiride<br>pioglitazone-metformin<br>rosiglitazone-glimepiride<br>rosiglitazone-metformin<br>saxagliptin-metformin<br>sitagliptin-metformin<br>repaglinide-metformin<br>sitagliptin-simvastatin<br>linagliptin-metformin<br>Dipeptidyl peptidase-4 (dpp-4) inhibitors: | | | |

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| | | | alogliptin<br>sitagliptin,<br>saxagliptin,<br>linagliptin<br>Incretin mimetics:<br>exenatide<br>liraglutide<br>Insulin:<br>insulin aspart<br>insulin aspart protamine & aspart (human)<br>insulin detemir<br>insulin glargine<br>insulin glulisine<br>insulin isophane & reg (human)<br>insulin isophane (human)<br>insulin lispro (human)<br>insulin lispro protamine & lispro (human)<br>insulin regular (human)<br>Meglitinides:<br>nateglinide<br>repaglinide | | | |

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| | | | Sodium-glucose cotransporter 2 Inhibitors:<br>canagliflozin<br>Sulfonylureas:<br>chlorpropamide<br>glimepiride<br>glipizide<br>glyburide<br>tolazamide<br>tolbutamide<br>glyburide micronized<br>Thiazolidinediones:<br>pioglitazone<br>rosiglitazone<br>The following are the statin medications by class for the denominator. The route of administration includes all oral formulations of the medications listed below.<br>Table 4. Statin Medications<br>HMG-COA reductase inhibitors (statins):<br>atorvastatin | | | |

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| | | | fluvastatin<br>lovastatin<br>pitavastatin<br>pravastatin<br>rosuvastatin<br>simvastatin<br>HMG-COA reductase inhibitors (statins) combinations:<br>amlodipine-atorvastatin<br>ezetimibe-atorvastatin<br>ezetimibe-simvastatin<br>niacin-lovastatin<br>niacin-simvastatin<br>sitagliptin-simvastatin | | | |
| Exclusions | •Less than 18 years of age<br>•Length of Stay > 120 days<br>•Comfort measures only documented<br>•Enrolled in clinical trials related to stroke<br>•Admitted for elective carotid | Patients who had documentation of use of anticoagulant medications during the measurement year. | We excluded the following individuals from the denominator:<br>Individuals with polycystic ovaries, gestational diabetes, or steroid-induced diabetes who do not have a face-to-face visit with a diagnosis of diabetes in any | Documentation of medical reason(s) for not prescribing a statin (eg, allergy, intolerance to statin medication(s), other medical reasons)<br>Documentation of patient reason(s) for not prescribing a statin (eg, patient declined, other | Cases are removed from the denominator if there was an in-hospital mortality or if discharge anti-lipid treatment was contraindicated. | Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge. |

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| | intervention<br>•Discharged to another hospital<br>•Left against medical advice<br>•Expired<br>•Discharged to home for hospice care<br>•Discharged to a health care facility for hospice care<br>•Documented reason for not prescribing statin medication at discharge | | setting during the measurement period.<br>Exclusion 1<br>Individuals with a diagnosis of polycystic ovaries who do not have a visit with a diagnosis of diabetes in any setting during the measurement period*; and,<br>Exclusion 2<br>Individuals with a diagnosis of gestational diabetes or steroid-induced diabetes who do not have a visit with a diagnosis of diabetes mellitus in any setting during the measurement period.<br>*Adapted from NCQA HEDIS 2013 (2013). Note: HEDIS uses a look-back period of one year prior to the measurement period | patient reasons)<br>Documentation of system reason(s) for not prescribing a statin (eg, financial reasons, other system reasons) | | |

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| | | | for both the prescription data and diagnosis. | | | |
| Exclusion Details | • The patient age in years is equal to the Discharge Date minus the Birthdate. Patients less than 18 years are excluded.<br>• The Length of Stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.<br>• Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1), 2 (Day 2 or after), and 3 (Timing unclear) are excluded.<br>• Patients are excluded if "Yes" is selected for Clinical Trial.<br>• Patients with ICD-10-PCS procedure codes for carotid | Patients who had documentation of use of anticoagulant medications during the measurement year.<br>ANTICOAGULANT MEDICATIONS<br>- Apixaban<br>- Argatroban<br>- Bivalirudin<br>- Dabigatran<br>- Dalteparin<br>- Desirudin<br>- Edoxaban<br>- Enoxaparin<br>- Fondaparinux<br>- Heparin<br>- Lepirudin<br>- Rivaroxaban<br>- Tinzaparin<br>- Warfarin | Table 5. Diagnostic Exclusions for Diabetes Denominator<br>Exclusion 1<br>Polycystic Ovaries<br>ICD-9-CM: 256.4<br>ICD-10-CM: E28.2<br>Exclusion 2<br>Steroid-Induced Diabetes<br>ICD-9-CM: 249.xx, 251.8, 962.0<br>ICD-10-CM: E08.00, E08.01, E08.10, E08.11, E08.21, E08.22, E08.29, E08.311, E08.319, E08.321, E08.329, E08.331, E08.339, E08.341, E08.349, E08.351, E08.359, E08.36, E08.39, E08.40, E08.41, E08.42, E08.43, E08.44, E08.49, E08.51, E08.52, E08.59, E08.610, E08.618, E08.620, | See attached for EHR Specifications. For Claims/Administrative:<br>Documentation of medical reason(s) for not prescribing a statin (eg, allergy, intolerance to statin medication(s), other medical reasons)<br>• Append modifier to CPT II code 4XXXF-1P (in development)<br>Documentation of patient reason(s) for not prescribing a statin (eg, patient declined, other patient reasons)<br>• Append modifier to CPT II code 4XXXF-2P (in development)<br>Documentation of system reason(s) for not a statin (eg, financial reasons, other system reasons) | Mortality Discharge Status (MtDCStat), Mortality Date (MtDate), and Discharge Date (DischDt) indicate an in-hospital mortality; DCLipid is marked as "Contraindicated" | Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge. These data are captured in the SVS VQI and VSGNE registries. |

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| | intervention procedures as identified in Appendix A, Table 8.3,, if medical record documentation states that the patient was admitted for the elective performance of this procedure are excluded.<br>• Patients with Discharge Disposition allowable value of 2 (Hospice-Home), 3 (Hospice-Health Care Facility), 4 (Acute Care Facility), 6 (Expired), or 7 (Left Against Medical Advice/AMA) are excluded.<br>• Patients are excluded if "Yes" is selected for Reason For Not Prescribing Statin Medication at Discharge. | | E08.621, E08.622, E08.628, E08.630, E08.638, E08.641, E08.649, E08.65, E08.69, E08.8, E08.9, E09.00, E09.01, E09.10, E09.11, E09.21, E09.22, E09.29, E09.311, E09.319, E09.321, E09.329, E09.331, E09.339, E09.341, E09.349, E09.351, E09.359, E09.36, E09.39, E09.40, E09.41, E09.42, E09.43, E09.44, E09.49, E09.51, E09.52, E09.59, E09.610, E09.618, E09.620, E09.621, E09.622, E09.628, E09.630, E09.638, E09.641, E09.649, E09.65, E09.69, E09.8, E09.9, E16.8, T38.0X1A, T38.0X2A, T38.0X3A, T38.0X4A, T50.0X1A, T50.0X2A, T50.0X3A, T50.0X4A<br>Gestational Diabetes<br>ICD-9-CM: 648.80, 648.81, 648.82, | • Append modifier to CPT II code 4XXXF-3P (in development) | | |

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| | | | 648.83, 648.84<br>ICD-10-CM: O24.410, O24.414, O24.419, O24.420, O24.424, O24.429, O24.430, O24.434, O24.439, O99.810, O99.814, O99.815 | | | |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable. | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>NA |
| Stratification | Not applicable, the measure is not stratified. | N/A | Depending on the operational use of the measure, measure results may be stratified by:<br>•State<br>•Accountable Care Organizations (ACOs)*<br>•Plan<br>•Physician Group<br>•Age - Divided into 6 categories: 18-24, 25-44, 45-64, 65-74, 75-84, and 85+ years<br>•Race/Ethnicity<br>• Dual Eligibility<br>*ACO attribution methodology is | | N/A | Not required |

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| | | | based on where the beneficiary is receiving the plurality of his/her primary care services and subsequently assigned to the participating providers. | | | |
| Type Score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score |
| Algorithm | 1. Start processing. Run cases that are included in the Stroke (STK) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.<br>2. Check ICD-10-CM Principal Diagnosis Code<br>a. If the ICD-10-CM Principal Diagnosis Code is not on Table 8.1, the case will | Step 1: Determine the denominator<br>Patients 18 years of age or older by the end of the measurement year AND who were discharged from an inpatient setting for an AMI, CABG or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the | To calculate Adherence to Statins for Individuals with Diabetes Mellitus, Medicare administrative claims data and related files, as described in detail in Section S.24, will be required.<br>Denominator: Individuals at least 18 years of age as of the beginning of the measurement period with diabetes mellitus and at least | See attached for calculation algorithm. | Please refer to numerator and denominator sections for detailed information. No diagram provided | All patients age 18 and older undergoing infrainguinal LEB who were prescribed statin at discharge divided by (all patients over 18 undergoing infrainguinal LEB minus those intolerant to statins minus those who died before discharge). |

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| | proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If the ICD-10-CM Principal Diagnosis Code is on Table 8.1, continue processing and proceed to Discharge Disposition.<br>3. Check Discharge Disposition<br>a. If Discharge Disposition equals 2, 3, 4, 6, 7 the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to Comfort Measures Only.<br>4. Check Comfort Measures Only | measurement year.<br>Step 2: Exclude patients who meet the exclusion criteria<br>Patients on anticoagulant therapy.<br>Step 3: Determine the numerator<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Step 4: Calculate the rate by dividing the numerator (Step 3) by the denominator (after exclusions) (Step 2). No diagram provided | two prescriptions for statins during the measurement period (12 consecutive months).<br>Create Denominator<br>1. Pull individuals who are 18 years of age or older as of the beginning of the measurement period.<br>2. Include individuals who were continuously enrolled in Part D coverage during the measurement year, with no more than a one-month gap in enrollment during the measurement year, or up until their death date if they died during the measurement period.<br>3. Include individuals who had no more than a one-month gap in Part A enrollment, no more | | | |

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| | a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Comfort Measures Only equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.<br>5. Check Clinical Trial<br>a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. | | than a one-month gap in Part B enrollment, and no more than one month of HMO enrollment during the current measurement period (FFS individuals only).<br>4. Of those individuals identified in Step 3, keep those who had:<br>At least two face-to-face encounters with a principal or secondary diagnosis of diabetes with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period;<br>OR<br>At least one face-to-face encounter with a principal or secondary diagnosis of diabetes in an | | | |

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| | b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.<br>c. If Clinical Trial equals No, continue processing and proceed to Elective Carotid Intervention.<br>6. Check admitted for Elective Carotid Intervention<br>a. If Elective Carotid Intervention is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Elective Carotid Intervention equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. | | acute inpatient setting or emergency department setting during the measurement period;<br>OR<br>At least one ambulatory prescription claim for insulin or other oral diabetes medication dispensed during the measurement period.<br>5. Of the individuals identified in Step 4, exclude those with a diagnosis of polycystic ovaries, gestational diabetes, or steroid-induced diabetes who do not have at least one face-to-face visit with a diagnosis of diabetes in any setting during the measurement period.<br>6. Pull all Part D | | | |

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| | Stop processing.<br>c. If Elective Carotid Intervention equals No, continue processing and proceed to Pre-Arrival Lipid-Lowering Agent.<br>7. Check Statin Medication Prescribed at Discharge<br>a. If Statin Medication Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Statin Medication Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator | | claims for statins. Attach generic name and drug ID to the dataset.<br>7a. Keep individuals with at least two claims for a drug in the statin class on different dates of service during the measurement period.<br>7b. Of the individuals not excluded in Step 5, keep those that are also in the statins class dataset created in Step 7a. This is the denominator.<br>7c. For each individual in the dataset created in Step 7b, identify the date of the first prescription in the measurement period as the index event.<br>Numerator: Individuals in the denominator with at least two prescriptions for | | | |

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| | Population. Stop processing.<br>c. If Statin Medication Prescribed at Discharge equals No, continue processing and check Reason for Not Prescribing Statin Medication at Discharge.<br>8. Check Reason for Not Prescribing Statin Medication at Discharge<br>a. If Reason for Not Prescribing Statin Medication at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.<br>b. If Reason for Not Prescribing Statin Medication at Discharge equals Yes, the case will proceed to a Measure Category | | statins with a PDC of at least 0.8 for statins.<br>Create Numerator<br>For the individuals in the denominator, calculate the PDC for each individual according to the following methods:<br>1. Determine the individual's measurement period, defined as the number of days from the index prescription date through the end of the measurement year, or death, whichever comes first. Index date is the date of the first statin prescription in the measurement period.<br>2. Within the measurement period, count the days the individual was covered by at least one drug in the | | | |

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| | Assignment of B and will not be in the Measure Population. Stop processing.<br>c. If Reason for Not Prescribing Statin Medication at Discharge equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1 | | statin class based on the prescription fill date and days of supply.<br>a. Pull Part D claims for drugs in the respective drug class for individuals in the denominators. Attach drug ID and generic name to the datasets.<br>b. Sort and de-duplicate claims by beneficiary ID, service date, generic name, and descending days' supply. If prescriptions for the same drug (generic name) are dispensed on the same date of service for an individual, keep the dispensing with the largest days' supply.<br>c. Calculate the number of days covered per individual for each drug class. | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | i. For prescriptions with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period.<br>ii. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.<br>iii. If prescriptions for different drugs (different generic names) overlap, do not adjust the prescription start date.<br>3. Calculate the PDC for each individual. Divide the number of covered days found in Step 2 by the number of days in | | | |

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| | | | the individual's measurement period found in Step 1.<br>An example of SAS code for Steps 1-3 was adapted from PQA and is also available at the URL: http://www2.sas.com/proceedings/forum2007/043-2007.pdf.<br>4. Of the individuals identified in Numerator Step 3, count the number of individuals with a calculated PDC of at least 0.8 for the statins class. This is the numerator. Available in attached appendix at A.1 | | | |
| Submission items | 5.1 Identified measures: 0639 : Statin Prescribed at Discharge<br>0074 : Chronic Stable Coronary Artery Disease: Lipid Control<br>0547 : Diabetes and | 5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy<br>0142 : Aspirin prescribed at discharge for AMI | 5.1 Identified measures: 0417 : Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation<br>0416 : Diabetic Foot | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized? Yes<br><br>5a.2 If not completely | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | Medication Possession Ratio for Statin Therapy<br>0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0545 : Adherence to Statins for Individuals with Diabetes Mellitus<br>0118 : Anti-Lipid Treatment Discharge<br>1519 : Statin Therapy at Discharge after Lower Extremity Bypass (LEB)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Three statin therapy measures were | 0076 : Optimal Vascular Care<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1.<br><br>5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2<br>Our current measure, NQF 0068 – Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet, assesses the percentage of patients 18 years of age and older who were discharged from | & Ankle Care, Ulcer Prevention – Evaluation of Footwear<br>0057 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) testing<br>0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0542 : Adherence to Chronic Medications<br>0541 : Proportion of Days Covered (PDC): 3 Rates by Therapeutic Category<br>0569 : ADHERENCE TO STATINS<br>0575 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)<br>0604 : Adult(s) with diabetes mellitus that had a serum | harmonized, identify difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: Related Measures: Maintenance submission of NQF #0074: Drug Therapy for Lowering LDL-Cholesterol | harmonized, identify difference, rationale, impact: N/A<br><br>5b.1 If competing, why superior or rationale for additive value: N/A | harmonized, identify difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: Related Measures: 0118 Antilipid therapy at discharge 0439 Discharged on statin medication |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | identified from the NQF database. All three measures address target diagnoses other than ischemic stroke or specific surgical procedures for patients 18 years or older: 0074 Coronary Artery Disease; 0118 isolated Coronary Artery Bypass Graft (CABG); and, 1519 Lower Extremity Bypass (LEB). Measure 1519 addresses inpatient organizational performance.. The other two measures, 0074 and 0118 are provider-level measures in the ambulatory care setting.<br><br>5b.1 If competing, why superior or rationale for additive value: Not Applicable | an inpatient setting with an acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, AND patients who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had documentation of the routine use of aspirin or another antiplatelet during the measurement year. NQF 0068 uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care | creatinine in last 12 reported months.<br>0619 : Diabetes with Hypertension or Proteinuria - Use of an ACE Inhibitor or ARB<br>0630 : Diabetes and Elevated HbA1C – Use of Diabetes Medications<br>0055 : Comprehensive Diabetes Care: Eye Exam (retinal) performed<br>0056 : Diabetes: Foot Exam<br>0059 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)<br>0062 : Comprehensive Diabetes Care: Medical Attention for Nephropathy<br>0063 : Comprehensive Diabetes Care: LDL-C | | | |

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| | | setting, providing a wide array of options for how data can be collected and reported.<br>The following is a description of the differences and the impact on interpretability and data collection burden between NQF 0068 and each related measure listed in 5.1a:<br>NQF 0142 – ASPIRIN PRESCRIBED AT DISCHARGE FOR AMI<br>This measure assesses the percentage of AMI patients, 18 years and older, who are prescribed aspirin at hospital discharge. The measure population only includes patients who have had an AMI, whereas NQF 0068 includes patients who have had an AMI, CABG or PCI | Screening<br>0064 : Comprehensive Diabetes Care: LDL-C Control <100 mg/dL<br>0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)<br>1879 : Adherence to Antipsychotic Medications for Individuals with Schizophrenia<br>5a.1 Are specs completely harmonized? No<br>5a.2 If not completely harmonized, identify difference, rationale, impact: NQF 0545 is related to and completely harmonized with the four NQF-endorsed measure that use the Proportion of Days Covered (PDC) method of calculating | | | |

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| | | procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0142 focuses only on aspirin prescribed at discharge while NQF 0068 focuses on documentation of the use of any antiplatelet medication during the measurement year. NQF 0142 is a facility-level measure that uses administrative claims and paper medical records from the inpatient setting; NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of | adherence. These four measures include one NQF-endorsed measure by PQA (NQF 0541) and three NQF-endorsed measures by CMS (NQF 0542, 0543, and 1879). For the related measures that are not completely harmonized with NQF 0545, the following sections identify differences between these measures and NQF 0545, rationale, and impact on interpretability, and data collection burden. Diabetes Measures by National Committee for Quality Assurance (NCQA) and Optum - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as the nine Diabetes | | | |

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| | | publically-reported rates or added burden of data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities. Additionally, both use value sets of codes to identify patients with AMI that do not conflict.<br>NQF 0067 – CHRONIC STABLE CORONARY ARTERY DISEASE: ANTIPLATELET THERAPY<br>This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease (CAD) who were seen by a physician within a 12-month period and who were prescribed | Measures developed by the National Committee for Quality Assurance (NCQA) and one measure developed by Optum. The nine NCQA measures (NQF 0055, 0056, 0057, 0059, 0061, 0062, 0063, 0064, and 0075) and the Optum measure (NQF 0604) are related to, but are not completely harmonized with, NQF 0545.<br>Differences Between NQF 0545 and NCQA and Optum Diabetes Measures - Identification of Individuals with Diabetes Mellitus: NQF 0545 uses the same algorithm for identifying individuals with diabetes as the NCQA and Optum Diabetes Measures, which entails using | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | aspirin or clopidogrel. The focus of this measure is very similar to NQF 0068 in that it assesses the routine use of antiplatelet therapy in a twelve-month period for patients with CAD. However, NQF 0068 includes more antiplatelet medications than just aspirin or clopidogrel and includes a broader population of patients with cardiovascular disease than just those with CAD.<br>Although NQF 0067 and NQF 0068 are both physician-level measures that are specified to collect data from administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care | diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data. However, NQF 0545 uses only claims for the 12-month measurement period, whereas the NCQA and Optum Diabetes Measures use a look-back period of one year for both the prescription data and diagnosis data. In addition, the Optum measure (NQF 0604) also uses a Disease Registry Input File, if available, to identify patients with diabetes mellitus.<br>Age of Individuals Included in the Measure: NQF 0545 includes individuals who are at least 18 years of age and older as of the | | | |

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| | | setting, the impact on interpretability of publically-reported rates or added burden of data collection should be minimal because NQF 0067 is currently only reported through registry data. Additionally, NQF 0067 is focused on only on patients with CAD, while NQF 0068 is focused on a broader population of patients with cardiovascular disease who would benefit from the use of antiplatelet medications.<br>NQF 0076 – OPTIMAL VASCULAR CARE<br>This composite measure assesses the percentage of adult patients ages 18 to 75 who have ischemic vascular disease with optimally-managed modifiable risk factors (blood | beginning of the measurement year, whereas the NCQA and Optum Diabetes Measures include individuals who are 18-75 years as of December 31st of the measurement year. Rationale - NQF 0545 uses a one-year time frame, rather than two years for the NCQA Diabetes measures, which allows more individuals (i.e., those with one year of data) to be included. NQF 0545 includes individuals 18 years and older, rather than 18-75 years for the NCQA and Optum measures, because many Medicare beneficiaries are over 75 years of age, and the guideline recommendations for the medication therapies do not | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | pressure, tobacco-free status, daily aspirin use) at their most recent visit with a physician during the measurement year. While the focus populations for NQF 0076 and NQF 0068 are very similar, NQF 0076 is a composite that includes assessment of blood pressure control and tobacco use status. NQF 0068 assesses the routine use of aspirin or other antiplatelet medications while NQF 0076 focuses only on aspirin use. NQF 0076 does not use administrative claims though it does use electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, which is similar to NQF 0068. | restrict to the 18-75 age group. Impact on interpretability - NQF 0545 is easier to interpret than the NCQA and Optum Diabetes measures because it focuses on a single year and includes all adults 18 years and older. Data collection burden - The target populations of NQF 0545 and the NCQA Diabetes measures are identified using administrative claims or encounter data, so the data collection burden should be similar. The Optum Diabetes measure uses a Disease Registry Input File, if available, and therefore, may require more time and resources than administrative data to identify patients with diabetes | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | Despite the similarities, there should be minimal impact on interpretability of publically-reported rates or added burden of data collection between the two measures since NQF 0076 is a composite of multiple indicators while NQF 0068 is focused only on antiplatelet therapy.<br>NQF 2452 – PERCUTANEOUS CORONARY INTERVENTION (PCI): POST-PROCEDURAL OPTIMAL MEDICAL THERAPY (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 2452 is a composite measure that assesses the percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, | mellitus. Diabetes Measures by American Podiatric Medical Association (APMA) - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as the two Diabetes Measures by the APMA (NQF 416 and 417). These two APMA measures are related to, but are not completely harmonized with NQF 0545. Differences Between NQF 0545 and APMA Diabetes Measures - Identification of Individuals with Diabetes Mellitus: NQF 0545 uses a different algorithm for identifying individuals with diabetes than the APMA Diabetes Measures. NQF 0545 requires two outpatient or | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 2452 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 2452 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 2452 is a physician-level measure that uses data from registries while NQF 0068 is a physician-level measure that uses | nonacute inpatient visits or one acute inpatient or emergency department visit or a prescription claim for insulin or other anti-diabetic medication. However, the APMA Diabetes Measures require only one claim for an outpatient visit or a nonacute inpatient visit or a selected procedure with a diagnosis of diabetes mellitus, but they do not use acute inpatient data or pharmacy data for identifying individuals with diabetes. Rationale - NQF 0545 requires two claims so the coded outpatient or nonacute inpatient diagnosis is confirmed. Using only one outpatient diagnosis could lead | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different and the data for each measure is collected from different data sources by different entities.<br>NQF 0964 – THERAPY WITH ASPIRIN, P2Y12 INHIBITOR, AND STATIN AT DISCHARGE FOLLOWING PCI IN ELIGIBLE PATIENTS (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 0964 is a composite measure that assesses the | to including individuals who do not actually have diabetes. NQF 0545 uses acute inpatient and pharmacy data in the definition of diabetes, in addition to outpatient and nonacute inpatient data, to capture as many individuals with a diagnosis of diabetes as possible. Impact on interpretability - Requiring two claims for an outpatient or nonacute inpatient diagnosis of diabetes will eliminate individuals who received a diagnosis of diabetes in error, or if it was coded as a rule-out diagnosis. If the additional data sources (i.e., acute inpatient data and pharmacy data) are not used, only individuals who have an outpatient or | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 0964 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0964 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 0964 is a facility-level measure | nonacute inpatient diagnosis of diabetes would be included in the denominator; those with only an inpatient admission or a prescription for diabetes would not be included. This might result in missing individuals with diabetes. Data collection burden - The target populations of NQF 0545 and the APMA Diabetes measures both are identified using administrative claims or encounter data, so the data collection burden should be similar. Diabetes Measures by ActiveHealth Management - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as two Diabetes Measures by ActiveHealth | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | that uses data from registries while NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities.<br>ANSWER FOR SECTION 5b.1<br>Our current measure, NQF 0068, has a long history of use and is | Management, NQF 0619 and 0630. These two ActiveHealth Management measures are related to, but are not completely harmonized with, NQF 0545. Differences Between NQF 0545 and ActiveHealth Management Diabetes Measures - Identification of Individuals with Diabetes Mellitus: NQF 0545 uses an algorithm for identifying individuals with diabetes, which entails using diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data during the 12-month measurement period. The two | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | implemented in four national programs: PQRS, EHR Incentive Program, CMS ACO Shared Savings Program, and the Heart/Stroke Recognition Program. | ActiveHealth Management Diabetes Measures require four diabetes mellitus diagnoses from administrative claims in the past 12 months, one diabetes mellitus diagnosis from electronic clinical data anytime in the past, one diabetes mellitus diagnosis in the electronic personal health record, or one diabetes mellitus diagnosis from administrative claims in the past five years plus filled prescriptions for diabetes medications, insulin, or a HbA1C value in the past 12 months. In addition, the target populations in the two ActiveHealth Management Diabetes Measures are further restricted | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | either to those with diabetes mellitus and hypertension or proteinuria (NQF 0619), or to those with diabetes mellitus and at least one elevated HbA1C in the past six months (NQF 0630). Age of Individuals Included in the Measure: NQF 0545 includes individuals who are at least 18 years of age as of the beginning of the measurement year, whereas the ActiveHealth Management Diabetes Measures include individuals who are 18-75 years of age. Rationale - The target population of NQF 0545 is defined on the basis of a diagnosis of diabetes mellitus and either at least two prescriptions of | | | |

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| | | | statins. This denominator definition of NQF 0545 limits the measure to those individuals who have been on the medication long enough for the prescribing provider to determine that statin therapy is appropriate for the patient and is tolerated. NQF 0545 includes individuals 18 years and older, rather than 18-75 years for the ActiveHealth Management Diabetes measures, because many Medicare beneficiaries are over 75 years of age, and the guideline recommendations do not restrict to the 18-75 age group. Impact on interpretability - NQF 0545 is easier to | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | interpret than the ActiveHealth Management Diabetes measures because it estimates adherence to medications among individuals with diabetes mellitus who have had at least two prescriptions, and it includes all adults 18 years and older. Data collection burden - NQF 0545 is based on administrative claims data. The ActiveHealth Management Diabetes measures are based on multiple data sources (e.g., administrative claims, electronic clinical data, patient data from electronic personal health records and feedback, provider survey). Therefore, | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | NQF 0545 presents less of a data collection burden. NQF 0569 Adherence to Statins (Health Benchmark-IMS Health) - NQF 0545 and 0569 address the same measure focus (i.e., adherence to statin therapy), but NQF 0569 has a different target population (i.e., diabetes, hyperlipidemia, and CAD). Differences Between NQF 0545 and NQF 569 - NQF 0545 uses the PDC methodology rather than MPR. The PDC used in NQF 0545 provides a more conservative estimate of adherence when a patient might be switching among several medications for the same indication or using multiple medications | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | within a single class (Nau, undated) than the MPR used by NQF 0569. The PDC provides a better estimate of adherence under these circumstances. NQF 0569 excludes "new users of a statin that started after the first three months of the measurement year." NQF 0545 covers the entire 12-month measurement period. The impact of the exclusion used in NQF 0569 would be to limit the measure to those who have at least 9 months of data. Rationale - NQF 0545 is intended as a statin adherence measure for all patients with diabetes. Impact on interpretability - NQF 0545 is easier to interpret than NQF | | | |

| | 0439: STK-06: Discharged on Statin Medication | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0074: Chronic Stable Coronary Artery Disease: Lipid Control | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) |
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| | | | 569 because it calculates adherence for all patients with diabetes, rather than those with diabetes and other indications. Data collection burden - There are no differences in data collection burden. Citation for 5a.2 - Nau, D. P. (undated). Proportion of Days Covered (PDC) as a Preferred Method of Measuring Medication Adherence. Pharmacy Quality Alliance. Retrieved November 12, 2013 from http://www.pqaalliance.org/images/uploads/files/PQA%20PDC%20vs%20%20MPR.pdf<br>5b.1 If competing, why superior or rationale for additive value: Not applicable | | | |

**Comparison of NQF #2836, #0545, #0068, #0118, #1519, and #0074**

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| Steward | The Joint Commission | Centers for Medicare & Medicaid Services | National Committee for Quality Assurance | The Society of Thoracic Surgeons | Society for Vascular Surgery | American College of Cardiology |
| Description | This measure captures the proportion of ischemic stroke patients who are prescribed a statin medication at hospital discharge.<br>This measure is a part of a set of eight nationally implemented measures that address stroke care (STK-1: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK- | The measure addresses adherence to statins. The measure is reported as the percentage of eligible individuals with diabetes mellitus who had at least two prescriptions for statins and who have a Proportion of Days Covered (PDC) of at least 0.8 during the measurement period (12 consecutive months). | The percentage of patients 18 years of age and older who were discharged from an inpatient setting with an acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had documentation of routine use of aspirin or another antiplatelet during the measurement year. | Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on a lipid lowering statin | Percentage of patients aged 18 years and older undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge. This measure is proposed for both hospitals and individual providers. | Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who have a LDL-C result <100 mg/dL OR patients who have a LDL-C result >=100 mg/dL and have a documented plan of care to achieve LDL-C <100mg/dL, including at a minimum the prescription of a statin |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | 8: Stroke Education, and STK-10: Assessed for Rehabilitation) that are used in The Joint Commission's hospital accreditation and Disease-Specific Care certification programs. STK-6, Discharged on Statin Medication, is one of six of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program. | | | | | |
| Type | Process | Process | Process | Process | Process | Process |
| Data Source | Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, | Administrative claims, Other, Electronic Clinical Data : Pharmacy For measure calculation, the following Medicare files were required:<br>• Denominator tables<br>• Prescription drug | Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Paper Medical Records N/A<br>No data collection instrument provided Attachment | Electronic Clinical Data : Registry STS Adult Cardiac Surgery Database Version 2.73; STS Adult Cardiac Surgery Database Version 2.8 went live on July 1, 2014. | Electronic Clinical Data : Registry The Society for Vascular Surgery Vascular Quality Initiative Registry<br>The Vascular Study Group of New England Registry | Electronic administrative data/claims, Electronic Clinical Data, Electronic Health/Medical Record, Registry data This measure, in its previous |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | Electronic Clinical Data : Pharmacy Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1).<br>No data collection instrument provided Attachment DischargedonStatin Medication_v4_Wed_Apr_01_12.18.50_CDT_2015.xls | benefit (Part D) coverage tables<br>• Beneficiary file<br>• Institutional claims (Part A)<br>• Non-institutional claims (Part B)—physician carrier/non-DME<br>• Prescription drug benefit (Part D) claims<br>For ACO attribution, the following were required:<br>• Denominator tables for Parts A and B enrollment<br>• Prescription drug benefit (Part D) coverage tables<br>• Beneficiary file<br>• Institutional claims (Part A)<br>• Non-institutional claims (Part B)—physician carrier/non-DME<br>• Prescription drug benefit (Part D) claims<br>For physician group attribution, the | 0068_IVD_Value_Sets_Final.xlsx | Available at measure-specific web page URL identified in S.1 No data dictionary | Attachment LEB defs v.01.09.doc | specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.<br>URL Attachment PCPI_CAD-2_LipidControl NQF 0074.pdf |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | following were required:<br>• Non-institutional claims (Part B)—physician carrier/non-DME<br>• Denominator tables to determine individual enrollment<br>• Beneficiary file or coverage table to determine hospice benefit and Medicare as secondary payor status<br>• CMS physician and physician specialty tables<br>• National Plan & Provider Enumeration System (NPPES) database<br>No data collection instrument provided Attachment NQF0545_-_Codes_Table_-_statins.xls | | | | |
| Level | Facility, Population : National | Clinician : Group/Practice, Health Plan, Integrated Delivery System, | Clinician : Group/Practice, Clinician : Individual | Facility, Clinician : Group/Practice | Facility, Clinician : Group/Practice, Clinician : Individual | Clinicians : Group, Clinicians : Individual |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | Population : State | | | | |
| Setting | Hospital/Acute Care Facility | Ambulatory Care : Clinician Office/Clinic | Ambulatory Care : Clinician Office/Clinic | Hospital/Acute Care Facility | Hospital/Acute Care Facility | Assisted Living, Ambulatory Care : Clinic, Group homes, Home, Ambulatory Care : Hospital Outpatient, Nursing home (NH) /Skilled Nursing Facility (SNF), Ambulatory Care : Office |
| Numerator Statement | Patients prescribed statin medication at hospital discharge. | Individuals in the denominator with at least two prescriptions for statins with a PDC of at least 0.8 for statins. | Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year. | Number of patients undergoing isolated CABG who were discharged on a lipid lowering statin | Patients undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge. | Patients who have a LDL-C result <100 mg/dL<br>OR<br>Patients who have a LDL-C result >=100 mg/dL and have a documented plan of care1 to achieve LDL-C <100 mg/dL, including at a minimum the prescription of a statin within a 12 month period<br>Definitions: |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | | | | | *Documented plan of care may also include: documentation of discussion of lifestyle modifications (diet, exercise); scheduled re-assessment of LDL-C<br>*Prescribed may include prescription given to the patient for a statin at one or more visits in the measurement period OR patient already taking a statin as documented in current medication list<br>Numerator Instructions:<br>The first numerator option can be reported for patients who have a documented LDL-C < 100 mg/dL at |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | | | | | any time during the measurement period. |
| Numerator Details | Statin Medication<br>• Statin Medication is represented with the QDM datatype and value set of Medication, Discharge: Statin (OID: 2.16.840.1.113883.3.117.1.7.1.225)<br>Non-Elective Inpatient Encounter<br>• Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set | The numerator is defined as individuals with a PDC of 0.8 or greater.<br>The PDC is calculated as follows:<br>• PDC Numerator: The PDC numerator is the sum of the days covered by the days' supply of all drug claims in each respective drug class. The period covered by the PDC starts on the day the first prescription is filled (index date) and lasts through the end of the measurement period, or death, whichever comes first. For prescriptions with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the | ADMINISTRATIVE<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Refer to Table IVD-E to identify medications for oral anti-platelet therapy.<br>ORAL ANTI-PLATELET THERAPIES (TABLE IVD-E)<br>PRESCRIPTIONS<br>- Aspirin<br>- Clopidogrel<br>- Aspirin-dipyridamole<br>- Prasugrel<br>- Ticagrelor<br>- Ticlopidine<br>---<br>MEDICAL RECORD<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the | Number of isolated CABG procedures in which discharge lipid lowering medication [DCLipid (STS Adult Cardiac Surgery Database Version 2.73)] is marked "yes" and lipid lowering discharge medication type [DCLipMT (STS Adult Cardiac Surgery Database Version 2.73)] is marked "statin" | ANY registry that includes anatomic details or CPT procedure codes is required to identify patients for numerator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE)are examples of registries capture detailed anatomic information, but the measure is not limited to these registries. Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external iliac artery and extending into the ipsilateral leg. It | See attached for EHR Specifications.<br>For Claims/Administrative: Report CPT II Code Patients who have LDL-C <100 mg/dL 3048F Most recent LDL-C <100 mg/dL<br>OR<br>Patients who have LDL-C =100 mg/dL and have a documented plan of care to achieve LDL-C <100 mg/dL, including prescription of lipid-lowering therapy<br>• 3049F Most recent LDL-C 100-129 mg/dL<br>OR<br>• 3050F Most recent LDL-C |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. | individual during the measurement period. If there are prescriptions for the same drug (generic name) on the same date of service, keep the prescription with the largest days' supply. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.<br>• PDC Denominator: The PDC denominator is the number of days from the first prescription date through the end of the measurement period, or death date, whichever comes first. | measurement year.<br>At a minimum, documentation in the medical record must include a note indicating the date when aspirin or another antiplatelet was prescribed or documentation of prescription from another treating physician. | | includes procedures with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. The numerator is calculated as the number of patients age 18 and over undergoing such a procedure who are prescribed a statin medication at the time of discharge, which is also captured in the above registries. | greater than or equal to 130 mg/dL<br>AND<br>• 05XXF (code in development) Lipid lowering therapy plan of care documented<br>AND<br>• 4002F Statin therapy prescribed |
| Denominator Statement | Patients with a principal diagnosis of ischemic stroke. | Individuals at least 18 years of age as of the beginning of the measurement period with diabetes mellitus and at least two prescriptions for statins during the | Patients 18 years or older by the end of the measurement year discharged from an inpatient setting with an AMI, CABG, or PCI during the 12 months prior to the | All patients undergoing isolated CABG | All patients aged 18 years and older undergoing lower extremity bypass as defined above who are discharged alive, excluding those patients who | All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | measurement period (12 consecutive months). | measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year. | | are intolerant to statins. | |
| Denominator Details | Principal Diagnosis of Ischemic Stroke<br>•Ischemic Stroke is represented with the QDM datatype and value set of Diagnosis, Active: Ischemic Stroke (OID: 2.16.840.1.113883.3.117.1.7.1.247)<br>•Ordinality: Principal (OID: 2.16.840.1.113883.3.117.1.7.1.14)<br>Non-Elective Inpatient Encounter<br>•Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: | Target population meets the following conditions:<br>1. Continuously enrolled in Part D with no more than a one-month gap in enrollment during the measurement year;<br>2. Continuously enrolled in Part A and Part B with no more than a one-month gap in Part A enrollment and no more than a one-month gap in Part B enrollment during the measurement year; and,<br>3. No more than one month of HMO enrollment during the measurement year.<br>IDENTIFICATION OF DIABETES MELLITUS<br>Individuals with | ADMINISTRATIVE<br>Patients are identified for the eligible population in two ways: by event or by diagnosis. The organization must use both methods to identify the eligible population, but a patient only needs to be identified by one method to be included in the measure.<br>Event. Any of the following during the year prior to the measurement year meet criteria:<br>- MI. Discharged from an inpatient setting with an MI (MI Value Set)*. Use both facility and professional claims to identify MI.<br>-CABG. Discharged | Number of isolated CABG procedures excluding cases with an in-hospital mortality or cases for which discharge anti-lipid treatment use was contraindicated. The SQL code used to create the function used to identify cardiac procedures is provided in the Appendix. | ANY registry that includes anatomic details or CPT procedure codes is required to identify patients for denominator inclusion. The Society for Vascular Surgery Vascular Quality Initiative and the Vascular Study Group of New England are examples of registries that capture detailed anatomic information, but the measure is not limited to these registries. Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external | See attached for EHR Specifications.<br>For Claims/Administrative: See coding tables attached for coding (ICD-9-CM, ICD-10-CM, CPT) |

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| | 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. | diabetes mellitus are identified using diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data.*<br>Individuals must have:<br>At least two encounters with a principal or secondary diagnosis of diabetes with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period;<br>OR<br>At least one encounter with a principal or secondary diagnosis of diabetes in an acute inpatient or emergency department setting during the measurement period;<br>OR<br>At least one ambulatory prescription claim for | from an inpatient setting with a CABG (CABG Value Set)*. Use both facility and professional claims to identify CABG.<br>-PCI. Patients who had a PCI (PCI Value Set)* in any setting.<br>Diagnosis. Patients who meet at least one of the following criteria during both the measurement year and the year prior to the measurement year. Criteria need not be the same across both years.<br>-At least one outpatient visit (Outpatient Value Set)* with an IVD diagnosis (IVD Value Set)*, or<br>-At least one acute inpatient encounter (Acute Inpatient Value Set)* with an IVD diagnosis (IVD Value Set)*.<br>*Due to the extensive volume of codes | | iliac artery and extending into the ipsilateral leg. It includes procedures with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. Only patients who are discharged alive are included in the denominator, and patients who are intolerant to statins are excluded, as described below. | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | insulin or other oral diabetes medication dispensed during the measurement period.<br>*Adapted from NCQA HEDIS 2012 (2012). Note: HEDIS uses a look-back period of one year for both the prescription data and diagnosis.<br>Table 1. Codes Used to Identify Diabetes Mellitus Diagnosis<br>ICD-9-CM: 250.xx, 357.2, 362.01, 362.02, 362.03, 362.04, 362.05, 362.06, 362.07, 366.41, 648.00, 648.01, 648.02, 648.03, 648.04<br>ICD-10-CM: E08.311, E08.319, E08.321, E08.329, E08.331, E08.339, E08.341, E08.349, E08.351, E08.359, E08.40, E08.42, E09.311, E09.319, E09.321, E09.329, E09.331, E09.339, E09.341, E09.349, E09.351, E09.359, E09.36, | associated with identifying the denominator for this measure, we are attaching a separate file with code value sets. See code value sets located in question S.2b.<br>---<br>MEDICAL RECORD<br>Documentation of IVD in the medical record includes:<br>- IVD<br>- Ischemic heart disease<br>- Angina<br>- Coronary atherosclerosis<br>- Coronary artery occlusion<br>- Cardiovascular disease<br>- Occlusion or stenosis of precerebral arteries (including basilar, carotid and vertebral arteries)<br>- Atherosclerosis of renal artery | | | |

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| | | E09.40, E09.42, E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E10.36, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, | - Atherosclerosis of native arteries of the extremities<br>- Chronic total occlusion of artery of the extremities<br>- Arterial embolism and thrombosis<br>- Atheroembolism.<br>Note: Use paper logs, patient registries or electronic medical records (EMRs) to identify the denominator, then use the medical record to confirm patient eligibility. | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351, E13.359, E13.36, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9, O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.311, O24.312, O24.313, O24.319, O24.32, O24.33, O24.811, O24.812, O24.813, O24.819, O24.82, O24.83, O24.911, | | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | O24.912, O24.913, O24.919, O24.92, O24.93<br>DRG: 637,638<br>Codes Used to Identify Encounter Type<br>Table 2.1. Outpatient Setting<br>CPT: 92002, 92004, 92012, 92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456<br>UB-92 revenue: 051x, 0520-0523, 0526-0529, 057x-059x, 077x, 082x-085x, 088x, 0982, 0983<br>Table 2.2 Non-Acute Inpatient<br>CPT: 99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337<br>UB-92 revenue: 0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x | | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | Table 2.3 Acute Inpatient<br>CPT: 99221-99223, 99224-99226, 99231-99233, 99238, 99239, 99251-99255, 99291<br>UB-92 revenue: 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987<br>Table 2.4 Emergency Department<br>CPT: 99281-99285<br>UB-92 revenue: 045x, 0981<br>The following are the diabetic medications by class for the denominator. The route of administration includes all oral and injectable formulations of the medications listed below.<br>Table 3. Codes Used to Identify Diabetic Individuals<br>Alpha-glucosidase | | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | inhibitors:<br>acarbose<br>miglitol<br>Anti-diabetic amylin analogs:<br>pramlintide<br>Anti-diabetic combinations:<br>alogliptin-metformin<br>alogliptin-pioglitazone<br>glipizide-metformin<br>glyburide-metformin<br>pioglitazone-glimepiride<br>pioglitazone-metformin<br>rosiglitazone-glimepiride<br>rosiglitazone-metformin<br>saxagliptin-metformin<br>sitagliptin-metformin<br>repaglinide-metformin<br>sitagliptin-simvastatin<br>linagliptin- metformin<br>Dipeptidyl peptidase-4 (dpp-4) inhibitors:<br>alogliptin<br>sitagliptin,<br>saxagliptin, | | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | linagliptin<br>Incretin mimetics:<br>exenatide<br>liraglutide<br>Insulin:<br>insulin aspart<br>insulin aspart<br>protamine & aspart (human)<br>insulin detemir<br>insulin glargine<br>insulin glulisine<br>insulin isophane & reg (human)<br>insulin isophane (human)<br>insulin lispro (human)<br>insulin lispro protamine & lispro (human)<br>insulin regular (human)<br>Meglitinides:<br>nateglinide<br>repaglinide<br>Sodium-glucose cotransporter 2 Inhibitors:<br>canagliflozin<br>Sulfonylureas:<br>chlorpropamide | | | | |

| | 2836: STK-06: Discharged on Statin Medication | 0545: Adherence to Statins for Individuals with Diabetes Mellitus | 0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet | 0118: Anti-Lipid Treatment Discharge | 1519: Statin Therapy at Discharge after Lower Extremity Bypass (LEB) | 0074: Chronic Stable Coronary Artery Disease: Lipid Control |
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| | | glimepiride<br>glipizide<br>glyburide<br>tolazamide<br>tolbutamide<br>glyburide micronized<br>Thiazolidinediones:<br>pioglitazone<br>rosiglitazone<br>The following are the statin medications by class for the denominator. The route of administration includes all oral formulations of the medications listed below.<br>Table 4. Statin Medications<br>HMG-COA reductase inhibitors (statins):<br>atorvastatin<br>fluvastatin<br>lovastatin<br>pitavastatin<br>pravastatin<br>rosuvastatin<br>simvastatin<br>HMG-COA reductase | | | | |

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| | | inhibitors (statins) combinations:<br>amlodipine-atorvastatin<br>ezetimibe-atorvastatin<br>ezetimibe-simvastatin<br>niacin-lovastatin<br>niacin-simvastatin<br>sitagliptin-simvastatin | | | | |
| Exclusions | Denominator Exclusions:<br>Patients admitted for elective carotid intervention. This exclusion is implicitly modeled by only including non-elective hospitalizations.<br>Patients with comfort measures documented.<br>Patients discharged to another hospital<br>Patients who left against medical advice<br>Patients who expired<br>Patients discharged to home for hospice care | We excluded the following individuals from the denominator:<br>Individuals with polycystic ovaries, gestational diabetes, or steroid-induced diabetes who do not have a face-to-face visit with a diagnosis of diabetes in any setting during the measurement period.<br>Exclusion 1<br>Individuals with a diagnosis of polycystic ovaries who do not have a visit with a diagnosis of diabetes in any setting during the measurement period*; and, | Patients who had documentation of use of anticoagulant medications during the measurement year. | Cases are removed from the denominator if there was an in-hospital mortality or if discharge anti-lipid treatment was contraindicated. | Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge. | Documentation of medical reason(s) for not prescribing a statin (eg, allergy, intolerance to statin medication(s), other medical reasons)<br>Documentation of patient reason(s) for not prescribing a statin (eg, patient declined, other patient reasons)<br>Documentation of system reason(s) for not prescribing a statin (eg, financial reasons, |

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| | Patients discharged to a health care facility for hospice care<br>Patients with an LDL-c of less than 70 mg/dL <30 days prior to arrival or any time during the hospital stay<br>Denominator Exceptions:<br>Patients with a reason for not prescribing statin medication at discharge. | Exclusion 2<br>Individuals with a diagnosis of gestational diabetes or steroid-induced diabetes who do not have a visit with a diagnosis of diabetes mellitus in any setting during the measurement period.<br>*Adapted from NCQA HEDIS 2013 (2013). Note: HEDIS uses a look-back period of one year prior to the measurement period for both the prescription data and diagnosis. | | | | other system reasons) |
| Exclusion Details | Denominator Exclusion Data Elements:<br>Non-Elective Inpatient Encounter<br>•Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient | Table 5. Diagnostic Exclusions for Diabetes Denominator<br>Exclusion 1<br>Polycystic Ovaries<br>ICD-9-CM: 256.4<br>ICD-10-CM: E28.2<br>Exclusion 2<br>Steroid-Induced Diabetes<br>ICD-9-CM: 249.xx, 251.8, 962.0 | Patients who had documentation of use of anticoagulant medications during the measurement year.<br>ANTICOAGULANT MEDICATIONS<br>- Apixaban<br>- Argatroban<br>- Bivalirudin<br>- Dabigatran<br>- Dalteparin | Mortality Discharge Status (MtDCStat), Mortality Date (MtDate), and Discharge Date (DischDt) indicate an in-hospital mortality; DCLipid is marked as "Contraindicated" | Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge. These data are captured in the SVS VQI and VSGNE registries. | See attached for EHR Specifications.<br>For Claims/Administrative:<br>Documentation of medical reason(s) for not prescribing a statin (eg, allergy, intolerance to statin |

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| | Encounter (OID: 2.16.840.1.113883.3.117.1.7.1.424)<br>Discharge Status (modeled as Attributes of the above Non-Elective Inpatient Encounter)<br>•Discharge status: Left Against Medical Advice (OID: 2.16.840.1.113883.3.117.1.7.1.308)<br>•Discharge status: Patient Expired (OID: 2.16.840.1.113883.3.117.1.7.1.309)<br>•Discharge status: Discharge To Acute Care Facility (OID: 2.16.840.1.113883.3.117.1.7.1.87)<br>•Discharge status: Discharged to Home for Hospice Care (OID: 2.16.840.1.113883.3.117.1.7.1.209)<br>•Discharge status: Discharged to Health Care Facility for Hospice Care (OID: | ICD-10-CM: E08.00, E08.01, E08.10, E08.11, E08.21, E08.22, E08.29, E08.311, E08.319, E08.321, E08.329, E08.331, E08.339, E08.341, E08.349, E08.351, E08.359, E08.36, E08.39, E08.40, E08.41, E08.42, E08.43, E08.44, E08.49, E08.51, E08.52, E08.59, E08.610, E08.618, E08.620, E08.621, E08.622, E08.628, E08.630, E08.638, E08.641, E08.649, E08.65, E08.69, E08.8, E08.9, E09.00, E09.01, E09.10, E09.11, E09.21, E09.22, E09.29, E09.311, E09.319, E09.321, E09.329, E09.331, E09.339, E09.341, E09.349, E09.351, E09.359, E09.36, E09.39, E09.40, E09.41, E09.42, E09.43, E09.44, E09.49, E09.51, E09.52, E09.59, E09.610, E09.618, E09.620, E09.621, E09.622, E09.628, | - Desirudin<br>- Edoxaban<br>- Enoxaparin<br>- Fondaparinux<br>- Heparin<br>- Lepirudin<br>- Rivaroxaban<br>- Tinzaparin<br>- Warfarin | | | medication(s), other medical reasons)<br>• Append modifier to CPT II code 4XXXF-1P (in development)<br>Documentation of patient reason(s) for not prescribing a statin (eg, patient declined, other patient reasons)<br>• Append modifier to CPT II code 4XXXF-2P (in development)<br>Documentation of system reason(s) for not a statin (eg, financial reasons, other system reasons)<br>• Append modifier to CPT II code 4XXXF-3P (in development) |

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| | 2.16.840.1.113883.3.117.1.7.1.207)<br>Comfort Measures<br>•Comfort Measures are represented with the QDM datatypes and value set of:<br>•Intervention, Order: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>•Intervention, Performed: Comfort Measures (OID: 1.3.6.1.4.1.33895.1.3.0.45)<br>Emergency Department Visit<br>•Emergency Department Visit is represented with the QDM datatype and value set of Encounter, Performed: Emergency Department Visit (OID: 2.16.840.1.113883.3.117.1.7.1.292)<br>LDL-c | E09.630, E09.638, E09.641, E09.649, E09.65, E09.69, E09.8, E09.9, E16.8, T38.0X1A, T38.0X2A, T38.0X3A, T38.0X4A, T50.0X1A, T50.0X2A, T50.0X3A, T50.0X4A<br>Gestational Diabetes<br>ICD-9-CM: 648.80, 648.81, 648.82, 648.83, 648.84<br>ICD-10-CM: O24.410, O24.414, O24.419, O24.420, O24.424, O24.429, O24.430, O24.434, O24.439, O99.810, O99.814, O99.815 | | | | |

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| | •LDL-c is represented with the QDM datatype and value set of Laboratory Test, Performed: LDL-c (OID: 2.16.840.1.113883.3.117.1.7.1.215)<br>Denominator Exceptions Data Elements:<br>Reasons for Not Prescribing Statin Medication<br>•Statin Allergy is represented with the QDM datatype and value set of Medication, Allergy: Statin Allergen (OID: 2.16.840.1.113883.3.117.1.7.1.423)<br>•Statin Ingredient Specific Medication is represented with the QDM datatype and value set of Medication, Discharge: Statin ingredient specific (OID: | | | | | |

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| | 2.16.840.1.113762.1.4.1021.7)<br>•Medical Reason is represented with the QDM datatype and value set of Medication, Discharge not done: Medical Reason (OID: 2.16.840.1.113883.3.117.1.7.1.473)<br>•Patient Refusal is represented with the QDM datatype and value set of Medication, Discharge not done: Patient Refusal (OID: 2.16.840.1.113883.3.117.1.7.1.93)<br>Non-Elective Inpatient Encounter<br>•Non-Elective Inpatient Encounter is represented with the QDM datatype and value set of Encounter, Performed: Non-Elective Inpatient Encounter (OID: | | | | | |

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| | 2.16.840.1.113883.3.117.1.7.1.424)<br>To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/. | | | | | |
| Risk Adjustment | No risk adjustment or risk stratification<br>Not applicable. | No risk adjustment or risk stratification<br>Not applicable | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>N/A | No risk adjustment or risk stratification<br>NA | No risk adjustment or risk stratification |
| Stratification | Not applicable, the measure is not stratified. | Depending on the operational use of the measure, measure results may be stratified by:<br>•State<br>•Accountable Care Organizations (ACOs)*<br>•Plan<br>•Physician Group<br>•Age - Divided into 6 categories: 18-24, 25-44, 45-64, 65-74, 75-84, and 85+ years<br>•Race/Ethnicity | N/A | N/A | Not required | |

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| | | • Dual Eligibility *ACO attribution methodology is based on where the beneficiary is receiving the plurality of his/her primary care services and subsequently assigned to the participating providers. | | | | |
| Type Score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score | Rate/proportion better quality = higher score |
| Algorithm | See attached HQMF file. Available at measure-specific web page URL identified in S.1 | To calculate Adherence to Statins for Individuals with Diabetes Mellitus, Medicare administrative claims data and related files, as described in detail in Section S.24, will be required.<br>Denominator: Individuals at least 18 years of age as of the beginning of the measurement period with diabetes mellitus | Step 1: Determine the denominator<br>Patients 18 years of age or older by the end of the measurement year AND who were discharged from an inpatient setting for an AMI, CABG or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the | Please refer to numerator and denominator sections for detailed information. No diagram provided | All patients age 18 and older undergoing infrainguinal LEB who were prescribed statin at discharge divided by (all patients over 18 undergoing infrainguinal LEB minus those intolerant to statins minus those who died before discharge). | See attached for calculation algorithm. |

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| | | and at least two prescriptions for statins during the measurement period (12 consecutive months).<br>Create Denominator<br>1. Pull individuals who are 18 years of age or older as of the beginning of the measurement period.<br>2. Include individuals who were continuously enrolled in Part D coverage during the measurement year, with no more than a one-month gap in enrollment during the measurement year, or up until their death date if they died during the measurement period.<br>3. Include individuals who had no more than a one-month gap in Part A enrollment, no more than a one-month gap in Part B enrollment, and no | measurement year.<br>Step 2: Exclude patients who meet the exclusion criteria<br>Patients on anticoagulant therapy.<br>Step 3: Determine the numerator<br>Patients who had documentation of routine use of aspirin or another antiplatelet during the measurement year.<br>Step 4: Calculate the rate by dividing the numerator (Step 3) by the denominator (after exclusions) (Step 2). No diagram provided | | | |

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| | | more than one month of HMO enrollment during the current measurement period (FFS individuals only).<br>4. Of those individuals identified in Step 3, keep those who had:<br>At least two face-to-face encounters with a principal or secondary diagnosis of diabetes with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period;<br>OR<br>At least one face-to-face encounter with a principal or secondary diagnosis of diabetes in an acute inpatient setting or emergency department setting during the measurement period;<br>OR<br>At least one ambulatory prescription claim for | | | | |

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| | | insulin or other oral diabetes medication dispensed during the measurement period.<br>5. Of the individuals identified in Step 4, exclude those with a diagnosis of polycystic ovaries, gestational diabetes, or steroid-induced diabetes who do not have at least one face-to-face visit with a diagnosis of diabetes in any setting during the measurement period.<br>6. Pull all Part D claims for statins. Attach generic name and drug ID to the dataset.<br>7a. Keep individuals with at least two claims for a drug in the statin class on different dates of service during the measurement period.<br>7b. Of the individuals not excluded in Step 5, keep those that are also in the statins class dataset created in Step | | | | |

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| | | 7a. This is the denominator.<br>7c. For each individual in the dataset created in Step 7b, identify the date of the first prescription in the measurement period as the index event.<br>Numerator: Individuals in the denominator with at least two prescriptions for statins with a PDC of at least 0.8 for statins.<br>Create Numerator<br>For the individuals in the denominator, calculate the PDC for each individual according to the following methods:<br>1. Determine the individual's measurement period, defined as the number of days from the index prescription date through the end of the measurement year, or death, whichever comes first. Index date | | | | |

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| | | is the date of the first statin prescription in the measurement period.<br>2. Within the measurement period, count the days the individual was covered by at least one drug in the statin class based on the prescription fill date and days of supply.<br>a. Pull Part D claims for drugs in the respective drug class for individuals in the denominators. Attach drug ID and generic name to the datasets.<br>b. Sort and de-duplicate claims by beneficiary ID, service date, generic name, and descending days' supply. If prescriptions for the same drug (generic name) are dispensed on the same date of service for an individual, keep the dispensing with the largest days' supply. | | | | |

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| | | c. Calculate the number of days covered per individual for each drug class.<br>i. For prescriptions with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period.<br>ii. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.<br>iii. If prescriptions for different drugs (different generic names) overlap, do not adjust the prescription start date.<br>3. Calculate the PDC for each individual. Divide the number of covered days found in Step 2 by the number of days in | | | | |

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| | | the individual's measurement period found in Step 1.<br>An example of SAS code for Steps 1-3 was adapted from PQA and is also available at the URL: http://www2.sas.com/proceedings/forum2007/043-2007.pdf.<br>4. Of the individuals identified in Numerator Step 3, count the number of individuals with a calculated PDC of at least 0.8 for the statins class. This is the numerator. Available in attached appendix at A.1 | | | | |
| Submission items | 5.1 Identified measures: 0639 : Statin Prescribed at Discharge<br>0074 : Chronic Stable Coronary Artery Disease: Lipid Control<br>0439 : STK-06: Discharged on Statin Medication | 5.1 Identified measures: 0417 : Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation<br>0416 : Diabetic Foot & Ankle Care, Ulcer Prevention – Evaluation of Footwear<br>0057 : Comprehensive | 5.1 Identified measures: 0067 : Chronic Stable Coronary Artery Disease: Antiplatelet Therapy<br>0142 : Aspirin prescribed at discharge for AMI<br>0076 : Optimal Vascular Care | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized? Yes<br><br>5a.2 If not completely harmonized, identify difference, rationale, | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify difference, | 5.1 Identified measures:<br><br>5a.1 Are specs completely harmonized?<br><br>5a.2 If not completely harmonized, identify |

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| | 0547 : Diabetes and Medication Possession Ratio for Statin Therapy<br>0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0545 : Adherence to Statins for Individuals with Diabetes Mellitus<br>0118 : Anti-Lipid Treatment Discharge<br>1519 : Statin Therapy at Discharge after Lower Extremity Bypass (LEB)<br><br>5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: Three statin therapy measures were identified from | Diabetes Care: Hemoglobin A1c (HbA1c) testing<br>0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease<br>0542 : Adherence to Chronic Medications<br>0541 : Proportion of Days Covered (PDC): 3 Rates by Therapeutic Category<br>0569 : ADHERENCE TO STATINS<br>0575 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%)<br>0604 : Adult(s) with diabetes mellitus that had a serum creatinine in last 12 reported months.<br>0619 : Diabetes with Hypertension or Proteinuria - Use of an ACE Inhibitor or ARB<br>0630 : Diabetes and Elevated HbA1C – Use of Diabetes | 5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: DUE TO THE TEXT LIMIT IN THIS SECTION – WE ARE PROVIDING OUR ANSWER FOR 5a.2 IN SECTION 5b.1.<br><br>5b.1 If competing, why superior or rationale for additive value: ANSWER FOR SECTION 5a.2<br>Our current measure, NQF 0068 – Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet, assesses the percentage of patients 18 years of age and older who were discharged from an inpatient setting with an acute myocardial | impact: N/A<br><br>5b.1 If competing, why superior or rationale for additive value: N/A | rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: Related Measures: 0118 Antilipid therapy at discharge 0439 Discharged on statin medication | difference, rationale, impact:<br><br>5b.1 If competing, why superior or rationale for additive value: Related Measures: Maintenance submission of NQF #0074: Drug Therapy for Lowering LDL-Cholesterol |

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| | the NQF database. All three measures address target diagnoses other than ischemic stroke or specific surgical procedures for patients 18 years or older: 0074 Coronary Artery Disease; 0118 isolated Coronary Artery Bypass Graft (CABG); and, 1519 Lower Extremity Bypass (LEB). Measure 1519 addresses inpatient organizational performance. The other two measures, 0074 and 0118 are provider-level measures in the ambulatory care setting. NQF# STK-06: Discharged on Statin Medication: The measures are completely harmonized to the extent possible, given the fact that | Medications<br>0055 : Comprehensive Diabetes Care: Eye Exam (retinal) performed<br>0056 : Diabetes: Foot Exam<br>0059 : Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)<br>0062 : Comprehensive Diabetes Care: Medical Attention for Nephropathy<br>0063 : Comprehensive Diabetes Care: LDL-C Screening<br>0064 : Comprehensive Diabetes Care: LDL-C Control <100 mg/dL<br>0061 : Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg)<br>1879 : Adherence to Antipsychotic Medications for Individuals with Schizophrenia | infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) during the 12 months prior to the measurement year, AND patients who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had documentation of the routine use of aspirin or another antiplatelet during the measurement year. NQF 0068 uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, providing a wide array of options for how data can be collected and reported.<br>The following is a | | | |

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| | the data source for #0439 is the paper medical record, and the data source for #2836 is the electronic health record.<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable. | 5a.1 Are specs completely harmonized? No<br><br>5a.2 If not completely harmonized, identify difference, rationale, impact: NQF 0545 is related to and completely harmonized with the four NQF-endorsed measure that use the Proportion of Days Covered (PDC) method of calculating adherence. These four measures include one NQF-endorsed measure by PQA (NQF 0541) and three NQF-endorsed measures by CMS (NQF 0542, 0543, and 1879). For the related measures that are not completely harmonized with NQF 0545, the following sections identify differences between these measures and NQF 0545, rationale, and impact on interpretability, and | description of the differences and the impact on interpretability and data collection burden between NQF 0068 and each related measure listed in 5.1a:<br>NQF 0142 – ASPIRIN PRESCRIBED AT DISCHARGE FOR AMI<br>This measure assesses the percentage of AMI patients, 18 years and older, who are prescribed aspirin at hospital discharge. The measure population only includes patients who have had an AMI, whereas NQF 0068 includes patients who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0142 focuses only on aspirin prescribed at discharge while NQF 0068 focuses on documentation of the | | | |

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| | | data collection burden. Diabetes Measures by National Committee for Quality Assurance (NCQA) and Optum - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as the nine Diabetes Measures developed by the National Committee for Quality Assurance (NCQA) and one measure developed by Optum. The nine NCQA measures (NQF 0055, 0056, 0057, 0059, 0061, 0062, 0063, 0064, and 0075) and the Optum measure (NQF 0604) are related to, but are not completely harmonized with, NQF 0545. Differences Between NQF 0545 and NCQA and Optum Diabetes Measures - Identification of Individuals with Diabetes Mellitus: NQF | use of any antiplatelet medication during the measurement year. NQF 0142 is a facility-level measure that uses administrative claims and paper medical records from the inpatient setting; NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities. Additionally, both use | | | |

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| | | 0545 uses the same algorithm for identifying individuals with diabetes as the NCQA and Optum Diabetes Measures, which entails using diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data. However, NQF 0545 uses only claims for the 12-month measurement period, whereas the NCQA and Optum Diabetes Measures use a look-back period of one year for both the prescription data and diagnosis data. In addition, the Optum measure (NQF 0604) also uses a Disease Registry Input File, if available, to identify patients with diabetes mellitus. Age of Individuals Included in the Measure: NQF 0545 includes | value sets of codes to identify patients with AMI that do not conflict.<br>NQF 0067 – CHRONIC STABLE CORONARY ARTERY DISEASE: ANTIPLATELET THERAPY<br>This measure assesses the percentage of patients aged 18 years and older with a diagnosis of coronary artery disease (CAD) who were seen by a physician within a 12-month period and who were prescribed aspirin or clopidogrel. The focus of this measure is very similar to NQF 0068 in that it assesses the routine use of antiplatelet therapy in a twelve-month period for patients with CAD. However, NQF 0068 includes more antiplatelet medications than just aspirin or clopidogrel and includes a broader | | | |

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| | | individuals who are at least 18 years of age and older as of the beginning of the measurement year, whereas the NCQA and Optum Diabetes Measures include individuals who are 18-75 years as of December 31st of the measurement year. Rationale - NQF 0545 uses a one-year time frame, rather than two years for the NCQA Diabetes measures, which allows more individuals (i.e., those with one year of data) to be included. NQF 0545 includes individuals 18 years and older, rather than 18-75 years for the NCQA and Optum measures, because many Medicare beneficiaries are over 75 years of age, and the guideline recommendations for the medication | population of patients with cardiovascular disease than just those with CAD.<br>Although NQF 0067 and NQF 0068 are both physician-level measures that are specified to collect data from administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, the impact on interpretability of publically-reported rates or added burden of data collection should be minimal because NQF 0067 is currently only reported through registry data. Additionally, NQF 0067 is focused on only on patients with CAD, while NQF 0068 is focused on a broader population of patients with cardiovascular disease who would benefit from the use of | | | |

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| | | therapies do not restrict to the 18-75 age group. Impact on interpretability - NQF 0545 is easier to interpret than the NCQA and Optum Diabetes measures because it focuses on a single year and includes all adults 18 years and older. Data collection burden - The target populations of NQF 0545 and the NCQA Diabetes measures are identified using administrative claims or encounter data, so the data collection burden should be similar. The Optum Diabetes measure uses a Disease Registry Input File, if available, and therefore, may require more time and resources than administrative data to identify patients with diabetes mellitus. Diabetes Measures by | antiplatelet medications.<br>NQF 0076 – OPTIMAL VASCULAR CARE<br>This composite measure assesses the percentage of adult patients ages 18 to 75 who have ischemic vascular disease with optimally-managed modifiable risk factors (blood pressure, tobacco-free status, daily aspirin use) at their most recent visit with a physician during the measurement year. While the focus populations for NQF 0076 and NQF 0068 are very similar, NQF 0076 is a composite that includes assessment of blood pressure control and tobacco use status. NQF 0068 assesses the routine use of aspirin or other antiplatelet medications while NQF 0076 focuses only on aspirin use. NQF 0076 does not use | | | |

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| | | American Podiatric Medical Association (APMA) - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as the two Diabetes Measures by the APMA (NQF 416 and 417). These two APMA measures are related to, but are not completely harmonized with NQF 0545. Differences Between NQF 0545 and APMA Diabetes Measures - Identification of Individuals with Diabetes Mellitus: NQF 0545 uses a different algorithm for identifying individuals with diabetes than the APMA Diabetes Measures. NQF 0545 requires two outpatient or nonacute inpatient visits or one acute inpatient or emergency department visit or a prescription | administrative claims though it does use electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting, which is similar to NQF 0068.<br>Despite the similarities, there should be minimal impact on interpretability of publically-reported rates or added burden of data collection between the two measures since NQF 0076 is a composite of multiple indicators while NQF 0068 is focused only on antiplatelet therapy.<br>NQF 2452 – PERCUTANEOUS CORONARY INTERVENTION (PCI): POST-PROCEDURAL OPTIMAL MEDICAL THERAPY (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 2452 is a | | | |

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| | | claim for insulin or other anti-diabetic medication. However, the APMA Diabetes Measures require only one claim for an outpatient visit or a nonacute inpatient visit or a selected procedure with a diagnosis of diabetes mellitus, but they do not use acute inpatient data or pharmacy data for identifying individuals with diabetes. Rationale - NQF 0545 requires two claims so the coded outpatient or nonacute inpatient diagnosis is confirmed. Using only one outpatient diagnosis could lead to including individuals who do not actually have diabetes. NQF 0545 uses acute inpatient and pharmacy data in the definition of diabetes, in addition to outpatient and nonacute inpatient | composite measure that assesses the percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 2452 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 2452 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 2452 is a physician-level measure that uses data | | | |

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| | | data, to capture as many individuals with a diagnosis of diabetes as possible. Impact on interpretability - Requiring two claims for an outpatient or nonacute inpatient diagnosis of diabetes will eliminate individuals who received a diagnosis of diabetes in error, or if it was coded as a rule-out diagnosis. If the additional data sources (i.e., acute inpatient data and pharmacy data) are not used, only individuals who have an outpatient or nonacute inpatient diagnosis of diabetes would be included in the denominator; those with only an inpatient admission or a prescription for diabetes would not be included. This might result in missing individuals with diabetes. Data | from registries while NQF 0068 is a physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different and the data for each measure is collected from different data sources by different entities.<br>NQF 0964 – THERAPY WITH ASPIRIN, P2Y12 INHIBITOR, AND STATIN AT DISCHARGE FOLLOWING PCI IN ELIGIBLE PATIENTS (NOTE: UNABLE TO SELECT IN 5.a1)<br>NQF 0964 is a composite measure | | | |

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| | | collection burden - The target populations of NQF 0545 and the APMA Diabetes measures both are identified using administrative claims or encounter data, so the data collection burden should be similar. Diabetes Measures by ActiveHealth Management - NQF 0545 has the same target population (i.e., individuals with diabetes mellitus) as two Diabetes Measures by ActiveHealth Management, NQF 0619 and 0630. These two ActiveHealth Management measures are related to, but are not completely harmonized with, NQF 0545. Differences Between NQF 0545 and ActiveHealth Management Diabetes Measures - Identification of | that assesses the percentage of patients undergoing PCI who receive prescriptions for all medications (aspirin, P2Y12 and statins) for which they are eligible for at discharge. The measure population for NQF 0964 is patients undergoing PCI while NQF 0068 includes patient who have had an AMI, CABG or PCI procedure, and patients who have diagnoses consistent with ischemic vascular disease. NQF 0964 assesses the prescription of aspirin, P2Y12 agents, and statins at discharge; NQF 0068 assesses documentation of use of antiplatelet medications during the measurement year. NQF 0964 is a facility-level measure that uses data from registries while NQF 0068 is a | | | |

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| | | Individuals with Diabetes Mellitus: NQF 0545 uses an algorithm for identifying individuals with diabetes, which entails using diagnosis codes and/or drug proxy to identify diabetes mellitus within the inpatient or outpatient claims data during the 12-month measurement period. The two ActiveHealth Management Diabetes Measures require four diabetes mellitus diagnoses from administrative claims in the past 12 months, one diabetes mellitus diagnosis from electronic clinical data anytime in the past, one diabetes mellitus diagnosis in the electronic personal health record, or one diabetes mellitus diagnosis from administrative claims in the past five years plus | physician-level measure that uses administrative claims, electronic clinical data, electronic health record data, and paper medical records from the ambulatory care setting.<br>There is no impact on interpretability of publically-reported rates or added burden of data collection because the focus of each measure is different, the accountable entity is different and the data for each measure is collected from different data sources by different entities.<br>ANSWER FOR SECTION 5b.1<br>Our current measure, NQF 0068, has a long history of use and is implemented in four national programs: PQRS, EHR Incentive Program, CMS ACO Shared Savings | | | |

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| | | filled prescriptions for diabetes medications, insulin, or a HbA1C value in the past 12 months. In addition, the target populations in the two ActiveHealth Management Diabetes Measures are further restricted either to those with diabetes mellitus and hypertension or proteinuria (NQF 0619), or to those with diabetes mellitus and at least one elevated HbA1C in the past six months (NQF 0630). Age of Individuals Included in the Measure: NQF 0545 includes individuals who are at least 18 years of age as of the beginning of the measurement year, whereas the ActiveHealth Management Diabetes Measures include individuals who are 18-75 years of age. | Program, and the Heart/Stroke Recognition Program. | | | |

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| | | Rationale - The target population of NQF 0545 is defined on the basis of a diagnosis of diabetes mellitus and either at least two prescriptions of statins. This denominator definition of NQF 0545 limits the measure to those individuals who have been on the medication long enough for the prescribing provider to determine that statin therapy is appropriate for the patient and is tolerated. NQF 0545 includes individuals 18 years and older, rather than 18-75 years for the ActiveHealth Management Diabetes measures, because many Medicare beneficiaries are over 75 years of age, and the guideline recommendations do not restrict to the 18-75 age group. Impact on interpretability - | | | | |

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| | | NQF 0545 is easier to interpret than the ActiveHealth Management Diabetes measures because it estimates adherence to medications among individuals with diabetes mellitus who have had at least two prescriptions, and it includes all adults 18 years and older. Data collection burden - NQF 0545 is based on administrative claims data. The ActiveHealth Management Diabetes measures are based on multiple data sources (e.g., administrative claims, electronic clinical data, patient data from electronic personal health records and feedback, provider survey). Therefore, NQF 0545 presents less of a data collection burden. NQF 0569 Adherence to Statins (Health Benchmark-IMS Health) - NQF 0545 | | | | |

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| | | and 0569 address the same measure focus (i.e., adherence to statin therapy), but NQF 0569 has a different target population (i.e., diabetes, hyperlipidemia, and CAD). Differences Between NQF 0545 and NQF 569 - NQF 0545 uses the PDC methodology rather than MPR. The PDC used in NQF 0545 provides a more conservative estimate of adherence when a patient might be switching among several medications for the same indication or using multiple medications within a single class (Nau, undated) than the MPR used by NQF 0569. The PDC provides a better estimate of adherence under these circumstances. NQF 0569 excludes "new | | | | |

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| | | users of a statin that started after the first three months of the measurement year." NQF 0545 covers the entire 12-month measurement period. The impact of the exclusion used in NQF 0569 would be to limit the measure to those who have at least 9 months of data. Rationale - NQF 0545 is intended as a statin adherence measure for all patients with diabetes. Impact on interpretability - NQF 0545 is easier to interpret than NQF 569 because it calculates adherence for all patients with diabetes, rather than those with diabetes and other indications. Data collection burden - There are no differences in data collection burden. Citation for 5a.2 - Nau, D. P. (undated). | | | | |

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| | | Proportion of Days Covered (PDC) as a Preferred Method of Measuring Medication Adherence. Pharmacy Quality Alliance. Retrieved November 12, 2013 from http://www.pqaalliance.org/images/uploads/files/PQA%20PDC%20vs%20%20MPR.pdf<br><br>5b.1 If competing, why superior or rationale for additive value: Not applicable | | | | |

## Appendix G: Pre-Evaluation Comments

Comments received as of March 7, 2016.

| Topic | Commenter | Comment |
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| 2111: Antipsychotic Use in Persons with Dementia | Submitted by Amy Elaine Sanders, MD<br>American Academy of Neurology | #5574: Medication overuse in this setting continues to be rampant, despite numerous measures requiring the opposite. There is little to no evidence to indicate efficacy, the black box warning is routinely ignored in clinical practice, and use of these meds is tantamount to chemical restraint. Strongly urge renewed endorsement. harmonization available with at least one other measure (AAN dementia set). |
| 2870: Dementia – Cognitive Assessment | Submitted by Amy Elaine Sanders, MD<br>American Academy of Neurology | #5572: This is an extremely important measure, with an enormous gap in care. EDs especially but also many physicians routinely prescribe opioids. Yet opioids are largely ineffective in controlling pain and are often the precipitant of rebound headache, which takes an already bad problem and makes it worse. |
| 2872: Overuse of Opioid Containing Medications for Primary Headache Disorders | Submitted by Amy Elaine Sanders, MD<br>American Academy of Neurology | #5573: favor endorsement |

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