Quality ID #187: Stroke and Stroke Rehabilitation: Thrombolytic Therapy
– National Quality Strategy Domain: Effective Clinical Care
– Meaningful Measure Area: Medication Management

2022 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Process

DESCRIPTION:
Percentage of patients aged 18 years and older with a diagnosis of acute ischemic stroke who arrive at the hospital within two hours of time last known well and for whom IV alteplase was initiated within three hours of time last known well.

INSTRUCTIONS:
This measure is to be submitted for **each episode** of acute ischemic stroke for patients who arrive at the hospital within two hours of time last known well and for whom IV alteplase was initiated within three hours of time last known well. It is anticipated that Merit-based Incentive Payment System (MIPS) eligible clinicians providing care for patients with acute ischemic stroke in the hospital setting will submit this measure.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All patients aged 18 years and older with a diagnosis of acute ischemic stroke whose time of arrival is within two hours (≤ 120 minutes) of time last known well

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for ischemic stroke (ICD-10-CM): I63.00, I63.011, I63.012, I63.013, I63.019, I63.02, I63.031, I63.032, I63.033, I63.039, I63.09, I63.10, I63.111, I63.112, I63.113, I63.119, I63.12, I63.131, I63.132, I63.133, I63.139, I63.19, I63.20, I63.211, I63.212, I63.213, I63.219, I63.22, I63.231, I63.232, I63.233, I63.239, I63.29, I63.30, I63.311, I63.312, I63.313, I63.319, I63.321, I63.322,I63.323, I63.329, I63.331, I63.332, I63.333, I63.339, I63.341, I63.342, I63.343, I63.349, I63.39, I63.40, I63.411, I63.412, I63.413, I63.419, I63.421, I63.422, I63.423, I63.429, I63.431, I63.432, I63.433, I63.439, I63.441, I63.442, I63.443, I63.449, I63.49, I63.50, I63.511, I63.512, I63.513, I63.519, I63.521, I63.522, I63.523, I63.529, I63.531, I63.532, I63.533, I63.539, I63.541, I63.542, I63.543, I63.549, I63.59, I63.6, I63.81, I63.89, I63.9
AND
Patient encounter during performance period (CPT): 99218, 99219, 99220, 99221, 99222, 99223, 99224, 99225, 99226, 99231, 99232, 99233, 99281, 99282, 99283, 99284, 99285, 99291, 99424, 99426
WITHOUT
Telehealth Modifier: GQ, GT, 95, POS 02
AND

Time last known well to arrival in the emergency department less than or equal to two hours (≤ 120 minutes)

NUMERATOR:
Patients for whom IV thrombolytic therapy was initiated at the hospital within three hours (≤ 180 minutes) of time last known well

Definition:
Last Known Well – 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 and symptoms of the current stroke or at his or her baseline state of health.

Numerator Options:

Performance Met:	IV alteplase initiated within three hours (≤ 180 minutes) of time last known well **(G8600)**
OR	
Denominator Exception:	IV alteplase not initiated within three hours (≤ 180 minutes) of time last known well for reasons documented by clinician (e.g. patient enrolled in clinical trial for stroke, patient admitted for elective carotid intervention, patient received tenecteplase (TNK)) **(G8601)**
OR	
Performance Not Met:	IV alteplase not initiated within three hours (≤ 180 minutes) of time last known well, reason not given **(G8602)**

RATIONALE:
The administration of thrombolytic agents to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials. These included two positive randomized controlled trials in the United States; The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration approved the use of intravenous recombinant tissue plasminogen activator (alteplase) for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV alteplase in patients treated within 3 hours of symptom onset. While controversy still exists among some specialists, the major society practice guidelines developed in the United States all recommend the use of IV alteplase for eligible patients. Physicians with experience and skill in stroke management and the interpretation of CT scans should supervise treatment.

CLINICAL RECOMMENDATION STATEMENTS:
IV alteplase (0.9 mg/kg, maximum dose 90 mg over 60 minutes with initial 10% of dose given as bolus over 1 minute) is recommended for selected patients who may be treated within 3 hours of ischemic stroke symptom onset or patient last known well or at baseline state. (Class 1, Level of Evidence A)(AHA/ASA).

Reference: 2018 AHA/ASA Acute Ischemic Stroke guidelines: Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, Brown M, Demaerschalk BM, Hoh B, Jauch EC, Kidwell CS, Leslie-Mazwi TM, Ovbiagele B, Scott PA, Sheth KN, Southerland AM, Summers DV, Tirschwell DL; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke.* 2018; 49:e46–e110.

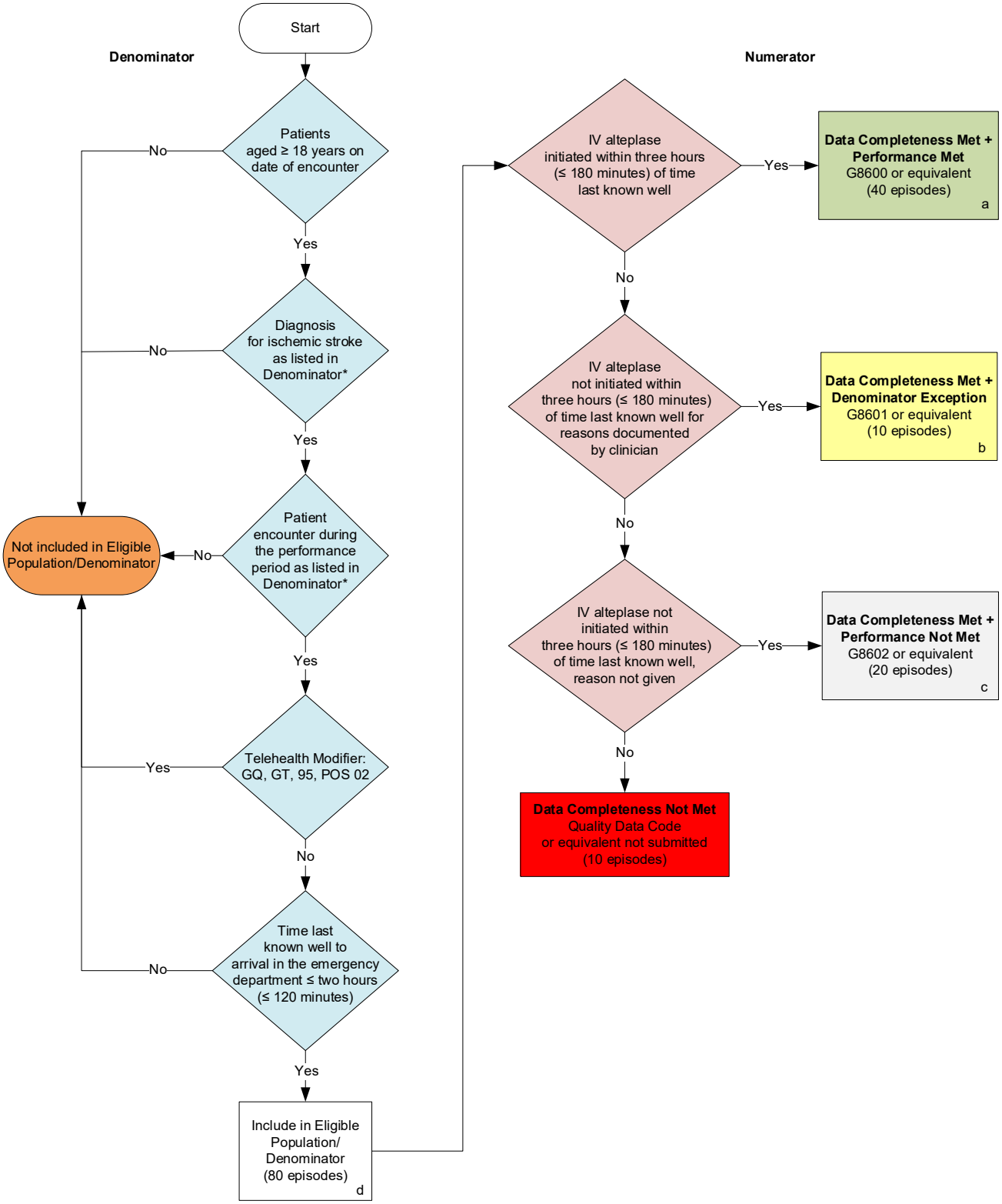
It may be reasonable to choose tenecteplase (single IV bolus of 0.25- mg/kg, maximum 25 mg) over IV alteplase in patients without contraindications for IV fibrinolysis who are also eligible to undergo mechanical thrombectomy (Class

IIB, Level of Evidence B-R)

Reference: Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association: Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, Brown M, Demaerschalk BM, Hoh B, Jauch E.C, Kidwell CS, Leslie-Mazwi TM, Ovbiagele B, Scott PA, Sheth KN, Southerland AM, Summers DV, Tirschwell DL. Stroke. 2019;50:e344–e418

2022 Clinical Quality Measure Flow for Quality ID #187: Stroke and Stroke Rehabilitation: Thrombolytic Therapy

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=40 episodes) + Denominator Exception (b=10 episodes) + Performance Not Met (c=20 episodes) = 70 episodes = **87.50%**

Eligible Population / Denominator (d=80 episodes) = 80 episodes

Performance Rate=

Performance Met (a=40 episodes) = 40 episodes = **66.67%**

Data Completeness Numerator (70 episodes) – Denominator Exception (b=10 episodes) = 60 episodes

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Episode

2022 Clinical Quality Measure Flow Narrative for Quality ID #187: Stroke and Stroke Rehabilitation: Thrombolytic Therapy

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*

1. Start with Denominator
2. Check *Patients aged greater than or equal to 18 years on date of encounter*:
    a. If *Patients aged greater than or equal to 18 years on date of encounter* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patients aged greater than or equal to 18 years on date of encounter* equals Yes, proceed to check *Diagnosis for ischemic stroke as listed in Denominator**.
3. Check *Diagnosis for ischemic stroke as listed in Denominator**:
    a. If *Diagnosis for ischemic stroke as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Diagnosis for ischemic stroke as listed in Denominator** equals Yes, proceed to check *Patient encounter during the performance period as listed in Denominator**.
4. Check *Patient encounter during the performance period as listed in Denominator**:
    a. If *Patient encounter during the performance period as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patient encounter during the performance period as listed in Denominator** equals Yes, proceed to check *Telehealth Modifier*.
5. Check *Telehealth Modifier*:
    a. If *Telehealth Modifier* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Telehealth Modifier* equals No, proceed to check *Time last known well to arrival in the emergency department less than or equal to two hours (less than or equal to 120 minutes)*.
6. Check *Time last known well to arrival in the emergency department less than or equal to two hours (less than or equal to 120 minutes)*:
    a. If *Time last known well to arrival in the emergency department less than or equal to two hours (less than or equal to 120 minutes)* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Time last known well to arrival in the emergency department less than or equal to two hours (less than or equal to 120 minutes)* equals Yes, include in *Eligible Population/Denominator*.
7. Denominator Population:
    a. Denominator population is all Eligible Episodes in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 episodes in the Sample Calculation.
8. Start Numerator
9. Check *IV alteplase initiated within three hours (less than or equal to 180 minutes) of time last known well*:

a. If *IV alteplase initiated within three hours (less than or equal to 180 minutes) of time last known well* equals Yes, include in *Data Completeness Met and Performance Met*.

    - *Data Completeness Met and Performance Met* is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 episodes in Sample Calculation.

b. If *IV alteplase initiated within three hours (less than or equal to 180 minutes) of time last known well* equals No, proceed to check *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well for reasons documented by clinician*.

10. Check *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well for reasons documented by clinician*:

    a. If *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well for reasons documented by clinician* equals Yes, include in *Data Completeness Met and Denominator Exception*.

        - *Data Completeness Met and Denominator Exception* is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b equals 10 episodes in the Sample Calculation.

    b. If *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well for reasons documented by clinician* equals No, proceed to check *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well, reason not given*.

11. Check *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well, reason not given*:

    a. If *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well, reason not given* equals Yes, include in *Data Completeness Met and Performance Not Met*.

        - *Data Completeness Met and Performance Not Met* is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 20 episodes in the Sample Calculation.

    b. If *IV alteplase not initiated within three hours (less than or equal to 180 minutes) of time last known well, reason not given* equals No, proceed to check *Data Completeness Not Met*.

12. Check *Data Completeness Not Met*:

        - If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 episodes have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 40 episodes) plus Denominator Exception (b equals 10 episodes) plus Performance Not Met (c equals 20 episodes) divided by Eligible Population/Denominator (d equals 80 episodes). All equals 70 episodes divided by 80 episodes. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 episodes) divided by Data Completeness Numerator (70 episodes) minus Denominator Exception (b equals 10 episodes). All equals 40 episodes divided by 60 episodes. All equals 66.67 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Episode

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.