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American Heart Association. Get With The Guidelines. Stroke

PROGRAM MEASURES & DEFINITIONS

Updated 1/16/24: This document is updated annually, although the measures within the Get With The Guidelines® program may change more frequently. For the most current list of measures, log into your Get With The Guidelines user account or contact your American Heart Association Quality Consultant.

Introduction:

Get With The Guidelines® – Stroke (GWTG-S) promotes the latest evidence-based stroke care. The product meets the needs of stroke centers of all levels of certification. It facilitates opportunities to enter and monitor data on patients with stroke related diagnoses, including: ischemic stroke, hemorrhagic stroke, transient ischemic attack, and subarachnoid hemorrhage. Elements tracked include hyperacute management, thrombolysis, interventional procedures, secondary prevention strategies, discharges, and follow-up care. Additionally, teams can optimize their quality improvement activities utilizing the creative reporting capabilities of our newest platform. Super User accounts are available for health system quality staff to monitor the performance of all affiliated sites allowing for high-level quality initiatives across the system.

The American Heart Association supports the Get With The Guidelines platforms with a knowledgeable team of quality improvement consultants. An added value to our customers is ongoing virtual education featuring guideline-driven care, current hot topics, model-sharing, expert consultant panels and more!

Stroke Achievement Measures:

ACUTE

- **Early antithrombotics:** Percent of patients with ischemic stroke or transient ischemic attack (TIA)who receive antithrombotic therapy by the end of hospital day two. AHASTR3
- **Intravenous (IV) thrombolytic arrive by 3.5 hour, treat by 4.5 hour:** Percent of acute ischemic stroke patients who arrive at the hospital within 210 minutes (3.5 hours) of time last known well and for whom IV thrombolytic was initiated at this hospital within 270 minutes (4.5 hours) of time last known well. AHASTR5
- **Venous thromboembolism (VTE) prophylaxis:** Percent of patients with ischemic stroke, hemorrhagic stroke or stroke not otherwise specified who receive VTE prophylaxis the day of or the day after hospital admission. AHASTR7

AT OR BY DISCHARGE

- **Anticoagulation for Atrial Fibrillation/Atrial AFlutter (AF):** Percent of patients with an ischemic stroke or TIA with AF discharged on anticoagulation therapy. AHASTR1
- **Antithrombotics:** Percent of patients with an ischemic stroke or TIA prescribed antithrombotic therapy at discharge. AHASTR2
- **Intensive statin therapy:** Percentage of ischemic stroke and TIA patients who are prescribed high-intensity statin therapy at discharge OR, if > 75 years of age, are prescribed at least moderate-intensity statin therapy at discharge. AHASTR4
- **Smoking cessation:** Percent of patients with ischemic or hemorrhagic stroke, or TIA with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. AHASTR6

COMPOSITE AND DEFECT-FREE MEASURES

- **GWTG composite:** The composite quality of care measure indicates how well the health care system does to provide appropriate, evidence-based interventions for each patient. AHASTR67
- **GWTG defect free:** Defect-free measure gauges how well your hospital did in providing all the appropriate interventions to every patient. AHASTR70

Stroke Quality Measures:

ACUTE

- **Dysphagia screen:** Percent of stroke patients who undergo screening for dysphagia with an evidence-based bedside testing protocol approved by the hospital before being given any food, fluids or medication by mouth. AHASTR8
- **National Institutes of Health Stroke Scale (NIHSS) reported:** Percent of ischemic stroke and stroke not otherwise specified patients with a score reported for NIH Stroke Scale (initial). AHASTR10
- **Time to intravenous thrombolytic therapy - 60 min:** Percent of acute ischemic stroke patients receiving intravenous tissue plasminogen activator (thrombolytic) therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. AHASTR13

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Stroke Quality Measures (continued)

AT OR BY DISCHARGE

- **Low density lipoprotein (LDL) documented:** Percent of ischemic stroke or TIA patients with a documented lipid profile. AHASTR9
- **Rehabilitation considered:** Percent of patients with stroke who were assessed for rehabilitation services. AHASTR11
- **Stroke education:** Percent of patients with stroke or TIA or their caregivers who were given education and/or educational materials during the hospital stay addressing all of the following: personal risk factors for stroke, warning signs for stroke, activation of emergency medical system, need for follow up after discharge and medications prescribed. AHASTR12

Stroke Reporting Measures:

ACUTE

- **Arrival mode:** Patients grouped by how they arrived at hospital. AHASTR19
- **Complication types:** Types of bleeding complications seen with thrombolytic therapies received by ischemic stroke patients at my hospital. AHASTR20
- **Discharge disposition:** Patients grouped by discharge disposition. AHASTR23
- **Distribution of door-in-door-out times at first hospital prior to transfer for acute therapy**: Patients with confirmed ischemic stroke grouped by time spent in the emergency department (ED) prior to transfer to a higher-level stroke center (e.g., PSC, CSC, etc.) for time-critical therapy. AHA271
- **Door to Computed tomography (CT) ≤ 20 min:** Percent of patients who receive brain imaging within 20 minutes of arrival. AHASTR35
- **Door to CT ≤ 25 min:** Percent of patients who receive brain imaging within 25 minutes of arrival. AHASTR16
- **Door To CT <3 hour:** Time from triage (ED arrival) to initial imaging work-up for all patients who arrive ≤ 3 hours from time last known well. AHASTR24
- **Door To CT <4.5 hour:** Time from triage (ED arrival) to initial imaging work-up for all patients who arrive ≤ 4.5 hours from time last known well. AHASTR25
- **Door To CT <8 hour:** Time from triage (ED arrival) to initial imaging work-up for all patients who arrive ≤ 8 hours from time last known well. AHASTR26
- **Door-in-door-out time at first hospital prior to transfer for acute therapy:** Percentage of confirmed stroke patients transported to my hospital by emergency medical service (EMS) and for whom ≤ 90 minutes was spent in the ED prior to transfer to a higher-level stroke center (Primary Stroke Center, Comprehensive Stroke Center, etc.)for time-critical therapy. AHASTR27
- **In-hospital mortality:** Patients who expired in the hospital grouped by final clinical diagnosis. AHASTR28
- **Ischemic stroke subtypes:** Patients with Ischemic Stroke grouped by stroke subtype. AHASTR29
- **IV thrombolytic therapy arrive by 2 hour, treat by 3 hours:** Percent of acute ischemic patients who arrive at the hospital within 120 minutes (2 hours) of time last known per hospital for whom IV thrombolytic was initiated at this hospital within 180 minutes (3 hours) of time last known well. AHASTR30
- **IV thrombolytic therapy arrive by 3 hour, treat by 3 hours:** Percent of acute ischemic stroke patients who arrive at the hospital within 180 minutes (3 hours) of time last known well and for whom IV thrombolytic was initiated at this hospital within 180 minutes (3 hours) of time last known well. AHASTR31
- **IV thrombolytic therapy arrive by 4.5 hour, treat by 4.5 hours:** Percent of acute ischemic stroke patients who arrive at the hospital within 270 minutes (4.5 hours) of time last known well and for whom IV thrombolytic was initiated at this hospital within 270 minutes (4.5 hours) of time last known well. AHASTR32
- **Last Known Well (LKW) to arrival times:** Patients grouped by time from last known well to ED arrival at my hospital. AHASTR33
- **Last known well to IV thrombolytic times:** Time from last known well to administration of IV thrombolytic for ischemic stroke patients treated at my hospital. AHASTR34
- **Missing time data:** Missing, incomplete or invalid date/time data for ischemic stroke patients. AHASTR36
- **Not admitted:** Patients grouped by reasons why they were not admitted. AHASTR38
- **Pre-notification:** Percent of patients who had advanced notification to the hospital provided by EMS. AHASTR39
- **Reasons for delay, IV thrombolytic initiation beyond 60 minutes:** Reasons why IV thrombolytic was initiated >60 minutes after hospital arrival in ischemic stroke patients treated with IV thrombolytic >60 minutes after hospital arrival. AHASTR40
- **Reasons for no IV thrombolytic:** Reasons why eligible acute ischemic stroke patients were not treated with IV thrombolytic at my hospital. AHASTR41
- **Reasons for no IV thrombolytic (hospital-related):** Hospital-related reasons why eligible acute ischemic stroke patients were not treated with IV thrombolytic at my hospital. AHASTR42
- **Reasons no IV thrombolytic (mild and rapidly improving stroke symptoms):** Reasons why eligible acute ischemic stroke patients were not treated with IV thrombolytic at my hospital (care team unable to determine eligibility; rapid improvement; stroke severity too mild). AHASTR43
- **Reasons no IV thrombolytic (3-hour window):** Percent of eligible acute ischemic stroke patients who arrived within three hours of last known well not treated with IV thrombolytic at my hospital who had reasons for not receiving IV thrombolytic. AHASTR14

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- **Reasons no IV thrombolytic (four-and-a-half-hours-window) (contra/warning):** Percent of eligible acute ischemic stroke patients who arrived within four-and-a-half-hours of last known well not treated with IV thrombolytic at your hospital who had reasons for not receiving IV thrombolytic. AHASTR15
- **Thrombolytic complications:** Percent of ischemic stroke patients with bleeding complications to thrombolytic therapy received at your hospital. AHASTR46
- **Thrombolytic therapies:** Patients with ischemic stroke grouped by type and location of thrombolytic therapy. AHASTR47
- **Time to intravenous thrombolytic therapy (30 minutes):** Percent of acute ischemic stroke patients receiving intravenous thrombolytic therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 30 minutes or less. AHASTR48
- **Time to intravenous thrombolytic therapy (45 minutes):** Percent of acute ischemic stroke patients receiving intravenous thrombolytic therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 45 minutes or less. AHASTR49
- **Time to intravenous thrombolytic therapy times:** Ischemic stroke patients treated at my hospital grouped by time from hospital arrival to initiation of thrombolytic therapy administration. AHASTR50

AT OR BY DISCHARGE

- **Antihypertensives:** Rate of prescription of different types of antihypertensive medications at discharge for ischemic stroke or TIA patients. AHASTR17
- **Antithrombotic medication(s) at discharge:** Patients grouped by antithrombotic medication prescribed at discharge. AHASTR18
- **Diabetes medications:** Percent of patients who have diabetes mellitus or are taking diabetic medication prior to admission who are discharged on diabetic medication. AHASTR22
- **Diabetes teaching:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment in the form of gylcemic control (diet or medication) or follow-up appointment for diabetes management scheduled at discharge. AHASTR21
- **Diabetes treatment:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment in the form of gylcemic control (diet or medication) or follow-up appointment for diabetes management scheduled at discharge. AHASTR130
- **Health-related social needs assessment:** Percentage of patients with stroke or TIA discharged from your facility who had documentation of a standardized health-related social needs form or assessment completed during admission. AHASTR243
- **Modified Rankin Scale (mRS) at discharge:** Patients grouped by Modified Rankin Scale at discharge. AHASTR37
- **Smoking cessation therapies prescribed:** Patients who who were given smoking cessation advice or counseling during the hospital stay grouped by smoking cessation therapies provided. AHASTR44
- **Statin prescribed at discharge:** Percent of ischemic stroke or TIA patients who are discharged on statin medication initial patient population. AHASTR45
- **Weight recommendation:** Percent of ischemic stroke or TIA patients with body mass index (BMI) ≥25 kg/m2 who receive recommendations at discharge for reducing weight and/or increasing activity. AHASTR51

STROKE DESCRIPTIVE MEASURES

- **Age:** Patients grouped by age. AHASTR52
- **Diagnosis:** Patients grouped by final clinical diagnosis related to stroke. AHASTR53
- **Dysphagia screening results:** Dysphagia screening results: patients grouped by dysphagia screening results. AHASTR54
- **Gender:** Percent of female, male and unknown patients. AHASTR55
- **Initial exam findings:** Patients grouped by initial exam findings. AHASTR56
- **Length of Stay (LOS):** LOS grouped by diagnosis. AHASTR57
- **Medical history:** A histogram of previously known medical history. AHASTR58
- **Race:** Patients grouped by race and Hispanic ethnicity. AHASTR59
- **Risk-Adjusted Mortality Ratio (Global Stroke Model):** A ratio comparing the actual in-hospital mortality rate to the risk-adjusted expected mortality rate. A ratio equal to 1 is interpreted as no difference between the hospital's mortality rate and the expected rate. A ratio greater than 1 indicates that the hospital's mortality rate is higher than the expected rate. A ratio of less than 1 indicates that the hospital's mortality rate is lower than the expected rate. AHASTR60
- **Risk-Adjusted Mortality Ratio (ischemic-only model):** A ratio comparing the actual in-hospital mortality rate to the risk-adjusted expected mortality rate. A ratio equal to 1 is interpreted as no difference between the hospital's mortality rate and the expected rate. A ratio greater than 1 indicates that the hospital's mortality rate is higher than the expected rate. A ratio of less than 1 indicates that the hospital's mortality rate is lower than the expected rate. AHASTR61
- **Symptom duration if diagnosis of TIA:** TIA patients grouped by symptom duration. AHASTR62

PROGRAM MEASURES & DEFINITIONS

INTRACEREBRAL HEMORRHAGE (ICH) MEASURES

- **Admission unit:** Percentage of patients with ICH who are admitted to an intensive care unit or dedicated stroke unit with physician and nursing neuroscience acute care expertise. AHASTR155
- **Anticoagulant reversal Direct oral anticoagulants (DOACs):** Percentage of patients with life-threatening ICH who are taking rivaroxaban, apixaban or dabigitran prior to arrival and who are treated with the appropriate reversal agent within 90 minutes of arrival. AHASTR296
- **Anticoagulant reversal agents:** Patients with ICH who received anticoagulant reversal grouped by agent administered. AHASTR299
- **Assessed for rehabilitation:** Percentage of patients with ICH who were assessed for, or who received, rehabilitation services. AHASTR156
- **Avoidance of corticosteroid use:** Percentage of patients with ICH who do not receive corticosteroids for elevated intracranial pressure or brain edema during acute hospitalization. AHASTR157
- **Baseline severity score:** Percentage of patients with ICH in whom a baseline severity score is measured and a total score recorded as part of initial evaluation on arrival at the hospital. AHASTR158
- **Blood pressure treatment at discharge:** Percentage of patients with ICH who are prescribed an antihypertensive medication or who have a documented blood pressure off medications less than 130/80mm Hg at the time of hospital discharge. AHASTR159
- **Coagulopathy reversal (warfarin):** Percentage of patients with ICH and an International Normalized Ratio (INR) >1.4 resulting from warfarin treatment who receive therapy to replace vitamin K dependent clotting factors within 90 minutes of ED presentation and who also receive IV vitamin K. AHASTR160
- **Dysphagia screening within 24 hours:** Percentage of patients with ICH for whom there is documentation that a dysphagia screening was performed within 24 hours of admission using a dysphagia screening tool approved by the institution in which the patient is receiving care. AHASTR161
- **ICH records with missing times:** Histogram of patient records missing one or more of the times required to calculate ICH measures. AHASTR162
- **Passed dysphagia screen before first oral intake:** Percentage of patients with ICH who were documented to have passed the most recent dysphagia screen before oral intake of fluids, nutrition or medications. AHASTR163
- **Reasons no anticoagulant reversal was administered:** Patients with ICH grouped by reason for not administering an anticoagulant reversal agent. AHASTR300
- **Time to anticoagulant reversal:** Patients with ICH who received anticoagulant reversal grouped by time from arrival to administration. AHASTR301
- **Venous thromboembolism (VTE) prophylaxis:** Percentage of patients with ICH who receive lower limb pneumatic compression on hospital day 0 or 1. AHASTR164
- **Inappropriate Platelet Transfusion:** Percentage of patients with intracerebral hemorrhage being treated with an antiplatelet who do not undergo intracranial surgery who are administered a platelet transfusion within 48 hours of arrival. AHASTR308
- **Antithrombotics Prior to Platelet Transfusion:** Patients with intracerebral hemorrhage who receive a platelet transfusion grouped by antithrombotics prior to arrival. AHASTR309

STROKE DATA QUALITY MEASURES

- **Record completion rate:** Percent of patient records that are saved as complete.
- **Stroke award qualified:** Percent of patients where the Get With The Guidelines-Stroke award criteria are met.
- **Missing data, stroke ward qualified:** Histogram of missing data elements needed to qualify for Get With The Guidelines-Stroke awards.

TARGET: STROKE℠:

Stroke kills over 128,000 people each year and is a leading cause of serious, long-term disability. The outcome depends in large part on how and when the patient is treated. For every eight patients treated with intravenous thrombolysis, one additional patient returns to living a normal life. And the sooner, the better, since reducing the time between emergency department arrival and IV thrombolysis improves each patient's odds of a good outcome. The American Stroke Association is ready to help you make that happen through our campaign, Target: Stroke.

PROGRAM MEASURES & DEFINITIONS

TARGET: STROKE℠ Measures:

- **Diagnosis:** Patients grouped by diagnosis. AHASTR53
- **Thrombolytic therapies:** Histogram of the various thrombolytic therapies. AHASTR47
- **Time to intravenous thrombolytic therapy – (60 minutes):** Percent of acute ischemic stroke patients receiving thrombolytic therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. AHASTR13
- **Time to intravenous thrombolytic therapy (45 minutes)::** Percent of acute ischemic stroke patients receiving thrombolytic therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 45 minutes or less. AHASTR49
- **IV thrombolytic arrive by 2 hours, treat by 3 hours:** Percent of acute ischemic stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom thrombolytic therapy was initiated at this hospital within 180 minutes (3 hours) of time last known well. AHASTR30
- **Time to intravenous thrombolytic therapy times:** Time from hospital arrival to initiation of thrombolytic therapy administration for ischemic stroke patients treated at my hospitals. AHASTR50

Rural Recognition Measures:

ACUTE

- **Rural stroke composite score:** Proportion of performance opportunities that were met among eligible opportunities for the 10 individual component measures. AHASTR304
- **Door to CT ≤ 25 min:** Percent of patients who receive brain imaging within 25 minutes of arrival. AHASTR304
- **Documentation of last known well or time of discovery of stroke symptoms:** Percentage of confirmed stroke patients for whom a time last known well (LKW) or time of discovery of stroke symptoms was documented. AHASTR304
- **Door-in/door-out time at first hospital prior to transfer for acute therapy:** Percentage of confirmed ischemic stroke patients for whom ≤ 90 minutes was spent in the ED prior to transfer to a higher-level stroke center (e.g., PSC, CSC, etc.) for time-critical therapy. AHASTR304
- **Dysphagia screen:** Percent of stroke patients who undergo screening for dysphagia with an evidence-based bedside testing protocol approved by the hospital before being given any food, fluids or medication by mouth. AHASTR304
- **IV thrombolytic arrive by 3.5 hour, treat by 4.5 hour:** Percent of acute ischemic stroke patients who arrive at the hospital within 210 minutes (3.5 hours) of time last known well and for whom IV thrombolytic was initiated at this hospital within 270 minutes (4.5 hours) of time last known well. AHASTR304
- **NIHSS reported:** Percent of ischemic stroke and stroke not otherwise specified patients with a score reported for NIH Stroke Scale (initial). AHASTR304
- **Noncontrast brain CT or MRI interpreted within 45 minutes from presentation:** Documentation of CT or MRI brain imaging interpretation within 45 minutes of presentation. AHASTR304
- **Prenotification:** Percent of patients who had advanced notification to the hospital provided by EMS. AHASTR304
- **Stroke consultation done:** Percentage of stroke patients who received a telestroke consult. AHASTR307
- **Time to intravenous thrombolytic therapy – (60 minutes):** Percent of acute ischemic stroke patients receiving thrombolytic therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 60 minutes or less. AHASTR304

RURAL DESCRIPTIVE MEASURES

- **Distribution of door-in-door-out times at first hospital prior to transfer for acute therapy:** Patients with confirmed ischemic stroke grouped by time spent in the ED prior to transfer to a higher-level stroke center (e.g., PSC, CSC, etc.) for time-critical therapy. AHASTR304

How Achievement and Quality Measures Are Determined:

Achievement and quality measures provide the basis for evaluating and improving treatment of stroke patients based on scientific evidence. Formulating those measures begins with a detailed review of stroke guidelines. Reporting and descriptive measures help sites to interpret their results on the achievement and quality measures by focusing on intermediate process steps, sub-populations of patients or emerging measures of care delivery.

When evidence for a process or aspect of care is so strong that failure to act on it reduces the likelihood of an optimal patient outcome, an achievement measure may be developed. Achievement measure data are continually collected and results are monitored over time to determine when new initiatives or revised processes should be incorporated. Achievement measures help speed the translation of strong clinical evidence into practice.

In order for participating hospitals to earn recognition for their achievement in the program, they must adhere to achievement measures.

Quality measures apply to processes and aspects of care that are strongly supported by science. Application of quality measures may not, however, be as universally indicated as achievement measures.

The Get With The Guidelines team follows a strict set of criteria in creating achievement and quality measures. We make every effort to ensure compatibility with existing performance measures from other organizations.

Get With The Guidelines–Stroke Awards: Recognition for Your Performance:

Hospital teams that participate actively and consistently in Get With The Guidelines-Stroke are rewarded with public recognition that helps hospitals hone a competitive edge in the marketplace by providing patients and stakeholders with tangible evidence of their commitment to improving quality care.

The awards recognize hospitals demonstrating at least 85 percent compliance in the seven Get With The Guidelines®- Stroke Achievement Measures. Tier levels are determined by the length of demonstrated performance. In addition to the base awards, your hospital can demonstrate competencies in elevated quality awards, including honor roll, plus awards, Target: Stroke Recognition, and Target: Type 2 Diabetes.

Silver Plus and Gold Plus Quality Awards are advanced levels of recognition acknowledging hospitals for consistent compliance with Quality Measures embedded within the registry tool.

Award-winning hospitals are honored at national recognition events and listed by name in advertisements that appear annually in the journal Stroke and in the "Best Hospitals" issue of U.S. News & World Report. All award-winning hospitals are provided with customizable marketing materials they can use to announce their achievements locally.