

Get With The GuidelinesSM–Stroke (GWTG–S) is the American Heart Association’s collaborative performance improvement program, demonstrated to improve adherence to evidence-based care of patients hospitalized with stroke.

The program provides hospitals with a Web-based Patient Management ToolTM (powered by Outcome Sciences, Inc.), decision support, a robust registry, real-time benchmarking capabilities and other performance improvement methodologies toward the goal of enhancing patient outcomes and saving lives.

GWTG-Stroke is for patients with stroke and transient ischemic attack patients.

STROKE ACHIEVEMENT MEASURES

Acute:

- **IV rt-PA 2 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 IV t-PA was initiated at this hospital within 180 minutes (3 hours) of time last known well
- **DVT prophylaxis*:** Percent of patients with an ischemic stroke, TIA, or a hemorrhagic stroke and who are non-ambulatory who receive DVT prophylaxis by end of hospital day two
- **Early antithrombotics*:** Percent of patients with ischemic stroke or TIA who received antithrombotic therapy by the end of hospital day two

At or by discharge:

- **Antithrombotics*:** Percent of patients with an ischemic stroke or TIA prescribed antithrombotic therapy at discharge
- **Anticoag for AF/AFlutter*:** Percent of patients with an ischemic stroke or TIA with atrial fibrillation/ flutter discharged on anticoagulation therapy
- **LDL 100 or ND*:** Percent of ischemic stroke or TIA patients with LDL \geq 100, or LDL not measured or on cholesterol-reducer prior to admission who are discharged on cholesterol-reducing drugs
- **Smoking cessation*:** Percent of patients with ischemic, 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

STROKE QUALITY MEASURES

Acute:

- **Dysphagia screen*:** Percent of patients with ischemic, or hemorrhagic stroke 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
- **IV rt-PA 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 t-PA was initiated at this hospital within 180 minutes (3 hours) of time last known well
- **Door-to-IV rt-PA in 60 minutes:** Percent of ischemic stroke patients receiving IV t-PA at this hospital who are treated within 60 minutes after triage (ED arrival)
- **Door-to-IV rt-PA times:** Time from triage (ED arrival) to administration of IV t-PA for ischemic stroke patients treated at this hospital

At or by discharge:

- **Stroke education*:** Percent of patients with ischemic, TIA or hemorrhagic stroke 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

- **Rehabilitation considered *:** Percent of patients with ischemic, TIA, or hemorrhagic stroke who were assessed for rehabilitation services
- **LDL documented:** Percent of ischemic stroke or TIA patients with a documented lipid profile
- **Weight recommendation:** Percent of ischemic stroke or TIA patients with BMI ≥ 25 kg/m² who receive recommendations at discharge for reducing weight and/or increasing activity
- **Intensive statin therapy:** Percent of patients diagnosed with ischemic stroke or TIA due to atherosclerosis who are discharged with intensive statin therapy
- **LDL 100 or ND - statin:** Percent of ischemic stroke patients with LDL ≥ 100 , or LDL not measured, or on cholesterol-reducer prior to admission, who are discharged on statin medication

* Denotes harmonized stroke consensus measure set

- **Last known well-to-IV rt-PA times:** Time from symptom onset to administration of IV t-PA for ischemic stroke patients treated at this hospital
- **Missing time data:** Percent of patients who are within one calendar day of ED arrival date with missing, incomplete or invalid date/time data for ischemic stroke
- **IV rt-PA contraindicated:** Percent of eligible acute ischemic stroke patients not treated with IV t-PA at this hospital who had reasons for not receiving IV t-PA
- **Reasons for no IV rt-PA:** Reasons why eligible acute ischemic stroke patients were not treated with IV t-PA at this hospital
- **Thrombolytic complications:** Percent of ischemic stroke patients with complications to thrombolytic therapy received at this hospital
- **Complication types:** Types of complications seen with thrombolytic therapies received by ischemic stroke patients at this hospital

STROKE REPORTING MEASURES

Acute:

- **EMS:** Patients grouped by how they arrived at this hospital
- **Pre-Notification:** Percent of cases of advanced notification by EMS for patients transported by EMS from scene
- **Last known well-to-arrival times:** Time from last known well to ED arrival at this hospital
- **Door-to-CT <3 hours:** Time from triage (ED arrival) to initial imaging work-up for all patients who arrive <3 hours from time last known well
- **Door-to-CT 3-6 hours:** Time from triage to initial imaging work-up for all sub-acute patients (arrive between 3-6 hours from time last known)
- **Discharge Destination:** Patients by how they left this hospital
- **Transferred out from ED:** Patients who were evaluated in the Emergency Department, found to have a diagnosis of ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage or transient ischemic attack, and are subsequently transferred to another acute care hospital rather than being admitted to this hospital
- **Symptoms duration if diagnosis of TIA:** TIA patients grouped by symptoms duration
- **Initial exam findings:** Patients grouped by initial exam findings
- **Dysphagia screening:** Patients grouped by dysphagia screening results
- **IV rt-PA 3.5 hours:** 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 t-PA was initiated at this hospital within 270 minutes (4.5 hours) of time last known well. Note: this is not an FDA approved use of IV tPA

At or by discharge:

- **Antithrombotic medications at discharge:** Patients grouped by antithrombotic medication prescribed at discharge
- **Diabetic medications:** Percent of patients who have diabetes mellitus OR are taking diabetic medication prior to admission who are discharged on diabetic medication
- **Diabetic treatment:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment at discharge
- **Diabetic teaching:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes teaching at discharge
- **Antihypertensive:** Rate of prescription of different types of anti-hypertensive medications at discharge for ischemic stroke or TIA patients

STROKE DESCRIPTIVE MEASURES

- Percent of female patients
- Patients grouped by age
- Patients grouped by race and Hispanic ethnicity
- Patients grouped by final clinical diagnosis related to stroke
- Percent of patients with a score reported for NIH Stroke Scale (Initial)
- In-hospital mortality
- Length of stay, grouped by diagnosis

STROKE PRIMARY STROKE CENTER (PSC) STROKE MEASURES

- **PSC Stroke-1:** Percent of patients with an ischemic stroke or a hemorrhagic stroke and who are non-ambulatory should start receiving DVT prophylaxis by end of hospital day two
- **PSC Stroke-2:** Percent of patients with an ischemic stroke prescribed antithrombotic therapy at discharge

- **PSC Stroke-3:** Percent of patients with an ischemic stroke with atrial fibrillation/flutter discharged on anticoagulation therapy
- **PSC Stroke-4:** Percent of acute ischemic stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV t-PA was initiated at this hospital within 180 minutes (3 hours) of time last known well
- **PSC Stroke-5:** Percent of patients with ischemic stroke who receive antithrombotic therapy by the end of hospital day two
- **PSC Stroke-6:** Percent of ischemic stroke patients with LDL > 100, or LDL not measured, or, who were on cholesterol reducing therapy prior to hospitalization are discharged on statin medication
- **PSC Stroke-7:** Percent of patients with with ischemic or hemorrhagic stroke who undergo evidence-based bedside testing protocol approved by the hospital before being given any food, fluids, or medication by mouth
- **PSC Stroke-8:** Percent of patients with ischemic or hemorrhagic stroke 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 at discharge
- **PSC Stroke-9:** Percent of patients with ischemic or hemorrhagic stroke with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival
- **PSC Stroke-10:** Percent of patients with an ischemic stroke or hemorrhagic stroke who were assessed for rehabilitation services

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 regarding that process or aspect of care. Achievement measure data are continually collected and results are monitored over time to determine when new initiatives or revised processes should be incorporated. As such, achievement measures help speed the translation of strong clinical evidence into practice.

Note: Measures previously referred to as Performance Measures will now be referred to as Achievement Measures by GWTG.

Visit americanheart.org/getwiththeguidelines for more information.

Web-based Patient Management Tool™ provided by Outcome, Cambridge, Mass.

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 GuidelinesSM 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. Therefore, the GWTG achievement measures continue to reflect the seven measures once referred to as performance measures. Three additional measures are included in the harmonized set of measures created by the American Stroke Association, the Joint Commission, and the Centers for Disease Control and Prevention. Note that the consensus measures appear in the quality section of the on-line reporting interface.