STROKE FACT SHEET

Get With The Guidelines®-Stroke 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 Tool™ (powered by QuintilesIMS), decision support, a robust registry, real-time benchmarking capabilities and other performance improvement methodologies toward the goal of enhancing patient outcomes and saving lives.

This fact sheet provides an overview of the achievement, quality, descriptive, and reporting measures currently reported on via Get With The Guidelines-Stroke.

Get With The Guidelines-Stroke is for patients with stroke and transient ischemic attack (TIA). The following is a list of the common stroke-related diagnoses included in Get With The Guidelines-Stroke:

ICD-10: I60*; I61*; I63*; G45.0, G45.1, G45.8, G45.9

STROKE ACHIEVEMENT MEASURES

ACUTE:

- **IV rt-PA arrive by 2 hour, treat by 3 hour**: 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. Corresponding measure available for inpatient stroke cases

- **Early antithrombotics:** Percent of patients with ischemic stroke or TIA who receive antithrombotic therapy by the end of hospital day two. Corresponding measures available for observation status only & inpatient stroke cases

- **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.

AT OR BY DISCHARGE:

- **Antithrombotics:** Percent of patients with an ischemic stroke or TIA prescribed antithrombotic therapy at discharge. Corresponding measures available for observation status only & inpatient stroke cases

- **Anticoagulation for AFib/Aflutter:** Percent of patients with an ischemic stroke or TIA with atrial fibrillation/flutter discharged on anticoagulation therapy. Corresponding measures available for observation status only & inpatient stroke cases
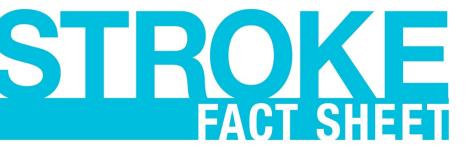
  - **Smoking cessation:** Percent of patients with ischemic or hemorrhagic stroke, or TIA with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. Corresponding measures available for observation status only & inpatient stroke cases

- **Statin Prescribed at Discharge**: Percent of ischemic stroke or TIA patients who are discharged on Statin Medication. Corresponding measures available for observation status only & inpatient stroke cases

- **GWTG/PAA Composite Measure:** The composite quality of care measure indicates how well the healthcare system does to provide appropriate, evidence-based interventions for each patient.
- **GWTG/PAA Defect-Free Measure:** Defect-free measure gauges how well your hospital did in providing all the appropriate interventions to every patient.

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. Corresponding measure available for inpatient stroke cases
- **Time to intravenous thrombolytic therapy-60 min:** Percent of acute ischemic stroke patients receiving intravenous tissue plasminogen activator (tPA) 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. TARGET: STROKE MEASURE Corresponding measure available for inpatient stroke cases
- **IV rt-PA 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 t-PA was initiated at this hospital within 270 minutes (4.5 hours) of time last known well. Corresponding measure available for inpatient stroke cases
- **NIHSS reported:** Percent of ischemic stroke and stroke not otherwise specified patients with a score reported for NIH Stroke Scale (Initial). Corresponding measure available for inpatient stroke cases

AT OR BY DISCHARGE:
- **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, the need for follow-up after discharge, and medications prescribed. Corresponding measures available for observation status only & inpatient stroke cases

- **Rehabilitation considered:** Percent of patients with stroke who were assessed for rehabilitation services. Corresponding measures available for observation status only & inpatient stroke cases

- **LDL documented**: Percent of ischemic stroke or TIA patients with a documented lipid profile. Corresponding measures available for observation status only & inpatient stroke cases

- **Intensive Statin Therapy:** Percent of ischemic stroke and TIA patients who are discharged with intensive statin therapy. Corresponding measures available for observation status only & inpatient stroke cases

COMPOSITE AND DEFECT FREE MEASURES:
- **CDC/COV Composite:** The composite quality of care measure indicates how well the healthcare system does   to provide appropriate, evidence-based interventions for each patient.
  - **CDC/COV Defect-Free:** Defect-free measure gauges how well your hospital did in providing all the appropriate interventions to every patient.

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STROKE REPORTING MEASURES

ACUTE:

- **% No IV tPA 3 hour (Contra/Warning):** Percent of eligible acute ischemic stroke patients not treated with IV t-PA at my hospital who had reasons for not receiving IV t-PA.

- **% No IV tPA 4.5 hour (Contra/Warning):** Percent of eligible acute ischemic stroke patients not treated with IV t-PA at my hospital who had reasons for not receiving IV t-PA.

- Arrival mode: Patients grouped by how they arrived at your hospital.

- **Complication types:** Types of bleeding complications seen with thrombolytic therapies received by ischemic stroke patients at my hospital.

- **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. Corresponding measure available for inpatient stroke cases

- **Door to CT <4.5 hour:** Time from triage to initial imaging work-up for all patients who arrive within 4.5 hours from time last known well.

- **Door to CT <8 hour:** Time from triage to initial imaging work-up for all patients who arrive within 8 hours from time last known well.

- **% Door to CT ≤ 25 minutes:** Percent of patients who receive brain imaging within 25 minutes of arrival. Corresponding measure available for inpatient stroke cases

- **IV rt-PA arrive by 3 hour, treat by 3 hour:** 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.

- **IV rt-PA arrive by 4.5 hour, treat by 4.5 hour:** 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 t-PA was initiated at this hospital within 270 minutes (4.5 hours) of time last known well.

- **Last known well to arrival times:** Time from last known well to ED arrival at your hospital. Corresponding measure available for inpatient stroke cases

- **Last known well to IV rt-PA times:** Time from symptom onset to administration of IV t-PA for ischemic stroke patients treated at my hospital.

- **Missing time data:** Missing, incomplete, or invalid date/time data for ischemic stroke patients.

- Not admitted: Patients grouped by reasons why they were not admitted.

- **Pre-notification:** Percent of cases of advanced notification by EMS for patients transported by EMS from scene.

- **Reasons for delay, IV rt-PA initiation beyond 60 minutes:** Reasons why IV t-PA was initiated greater than 60 minutes after hospital arrival in ischemic stroke patients treated with IV t-PA greater than 60 minutes after hospital arrival.

- **Reasons for no IV rt-PA (Contra/Warning):** Reasons why eligible acute ischemic stroke patients were not treated with IV t-PA at my hospital.

- **Reasons for no IV tPA (Hospital-Related):** Reasons why eligible acute ischemic stroke patients were not treated with IV t-PA at my hospital.

- **Time to Intravenous Thrombolytic Therapy – 45 min:** Percent of acute ischemic stroke patients receiving intravenous tissue plasminogen activator (tPA) 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. TARGET: STROKE MEASURE

- **Time to Intravenous Thrombolytic Therapy Times:** Time from hospital arrival to initiation of thrombolytic therapy administration for ischemic stroke patients treated at my hospital.

- **Thrombolytic complications:** Percent of ischemic stroke patients with bleeding complications to thrombolytic therapy received at my hospital.

- **Thrombolytic therapies**: A histogram of the various thrombolytic therapies.

- **Mechanical Endovascular Reperfusion Therapy for Eligible Patients with Ischemic Stroke:** Percentage of eligible patients with ischemic stroke due to large vessel occlusion who receive mechanical endovascular reperfusion therapy

- **Door to Start of Revascularization (DTR) within 120 minutes:** Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy and for whom the first pass (i.e., deployment) of the device is <= 120 minutes after hospital arrival.

- **Median Door to Start of Revascularization (DTR)Times:** Median time from hospital arrival to first pass (i.e. deployment) of device for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy.

- **Door to Start of Revascularization (DTR) Times (Graphical Display of Distribution):** Histogram of the distribution of times from hospital arrival to first pass (i.e. deployment) of device for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy

- **Door to Puncture (DTP) Time within 90 minutes:** Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy and for whom arterial puncture time is <= 90 minutes after hospital arrival.

- **Median Door to Puncture (DTP) Times:** Median time from hospital arrival to arterial puncture time for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Door to Puncture (DTP) Times (Graphical Display of Distribution):** Histogram of the distribution of times from hospital arrival to arterial puncture for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Picture to Puncture (PTP) Time within 60 minutes:** Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy for whom arterial puncture time is <= 60 minutes after brain imaging time.
- **Median Picture to Puncture (PTP) Time:** Median time from brain imaging to arterial puncture time for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Picture to Puncture (PTP) Times (Graphical Display of Distribution)**: Histogram of the distribution of times from brain imaging to arterial puncture for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Median Puncture to Start of Revascularization (PTR) Time:** Median time from arterial puncture to first pass (i.e. deployment) of device for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Puncture to Start of Revascularization (PTR) times (Graphical Display of Distribution):** Histogram of the distribution of times from arterial puncture to first pass (i.e. deployment) of device for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Median Puncture to Recanalization/Reperfusion (PTRp) Time:** Median time from arterial puncture to recanalization/reperfusion with TICI grade 2b or 3 for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Puncture to Recanalization/Reperfusion (PTRp) Times (Graphical Display of Distribution):** Histogram of the distribution of times from arterial puncture to recanalization/reperfusion with TICI grade 2b or 3 for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Door to Recanalization/Reperfusion (DTRp) within 120 Minutes:** Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy and for whom the time from hospital arrival to recanalization/reperfusion with TICI grade 2b or 3 is <= 120 minutes

- **Median Door to Recanalization/Reperfusion (DTRp) Time:** Median time from hospital arrival to recanalization/reperfusion with TICI grade 2b or 3 for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Door to Recanalization/Reperfusion (DTRp) Times (Graphical Display of Distribution):** Histogram of the distribution of times from hospital arrival to recanalization/ reperfusion with TICI grade 2b or 3 for patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy
- **Rate of Substantial Reperfusion:** Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy who have post-reperfusion TICI grade 2b or 3.
- **Thrombolysis in Cerebral Infarction (TICI) Post-Treatment Reperfusion Grades for Successful Mechanical Endovascular Reperfusion Therapy (Graphical Display of Distribution):** Patients with acute ischemic stroke who undergo successful mechanical endovascular reperfusion therapy grouped by post-treatment Thrombolysis in Cerebral Infarction (TICI) Grade (2b and 3)
- **90-Day Modified Rankin Scores (mRS) following Mechanical Endovascular Reperfusion Therapy (Graphical Display of Distribution):** Patients with acute ischemic stroke who received mechanical endovascular reperfusion therapy grouped by modified Rankin Score (mRS) at 90 days post-discharge
- **Discharge Disposition following Mechanical Endovascular Reperfusion Therapy (Graphical Display of Distribution):** Patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy grouped by Discharge Disposition

AT OR BY DISCHARGE:
- **Antihypertensives:** Rate of prescription of different types of anti-hypertensive medications at discharge for ischemic stroke or TIA patients. Corresponding measure available for observation status only cases
- **Antithrombotic medication(s) at discharge:** Patients grouped by antithrombotic medication prescribed at discharge. Corresponding measure available for observation status only cases
- **Discharge disposition:** Patients grouped by discharge disposition.
- **Diabetic medications:** Percent of patients who have diabetes mellitus or are taking diabetic medication prior to admission who are discharged on diabetic medication.

  Corresponding measure available for observation status only cases

- **Diabetes teaching:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes   teaching at discharge. Corresponding measure available for observation status only cases

- **Diabetes treatment:** Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment in the form of gylcemic control (diet and/or medication) at discharge. Corresponding measure available for observation status only cases

- **In-hospital mortality:** In-hospital mortality.

- **Modified Rankin Scale at discharge:** Patients grouped by Modified Rankin Scale at discharge. Corresponding measure available for observation status only cases

- **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. Corresponding measure available for observation status only cases

STROKE DESCRIPTIVE MEASURES

- **Age:** Patients grouped by age.
- **Diagnosis:** Patients grouped by final clinical diagnosis related to stroke.
- **Dysphagia screening results:** Patients grouped   by dysphagia screening results.
- **Gender:** Percent of female, male, and unknown patients.
- Initial exam findings: Patients grouped by initial   exam findings.
- **LOS**: Length of Stay, grouped by diagnosis.
- **Medical History:** A histogram of previously known   medical history.
- **Race:** Patients grouped by race and Hispanic ethnicity.
- **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.

- **Risk-Adjusted Mortality Ratio (Ischemic and Hemorrhagic 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.

- **Symptom duration if diagnosis of TIA:** TIA patients grouped by symptom duration.

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 award qualified:** Histogram of missing data elements needed to qualify for Get With The Guidelines-Stroke awards.

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.

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 get more than a pat on the back. They're 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.

Silver, Gold, Silver Plus and Gold Plus award-winning Get With The Guidelines-Stroke hospitals are honored at national recognition events during the International Stroke Conference 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. Moreover, all award-winning hospitals are provided with customizable marketing materials they can use to announce their achievements locally.

TARGET: STROKE^{SM}

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 new campaign, Target: Stroke.

Target: Stroke provides health care professionals with 11 Best Practice Strategies for achieving door-to-needle (DTN) times of 60 minutes or less for ischemic stroke patients. The strategies include protocols, clinical decision support, order sets, guidelines, data measurement tools, feedback processes and other resources for improving and reporting DTN times.

To learn more about Target: Stroke go to http://www.strokeassociation.org/targetstroke

ADDITIONAL MEASURES

Get With The Guidelines®-Stroke supports the collection of several additional measure sets within the Web-based Patient Management Tool™. If you would like information on measure sets available to meet stroke certification or state/regional data collection needs, please contact the Help Desk at 888-526-6700.

Clinical Tools for Quality Improvement

Get With The Guidelines®-Stroke is a comprehensive program for supporting quality stroke care, including a library of tools and resources to help improve processes and maximize effectiveness. More information on the library of tools is available at the link below.

Visit heart.org/focusonquality for more information

Web-based Patient Management Tool™ provided by QuintilesIMS™