COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES

HARBOR-UCLA MEDICAL CENTER

SUBJECT: CODE STROKE POLICY **POLICY NO. 351B**

PURPOSE:

To ensure timely evaluation and management of adult acute stroke patients and identify the roles and responsibilities of personnel during a Code Stroke Activation in a manner that is consistent with expert consensus and with Joint Commission and American Heart Association guidelines.

POLICY:

Harbor-UCLA Medical Center is available for emergency evaluation and management of acute stroke patients 24 hours a day, 365 days a year. Goals include achieving an optimal, short door-to-IV-thrombolytic time for eligible patients and rapid identification and management of endovascular intervention candidates.

DEFINITIONS:

1. **Code Stroke Activation:** The emergency process for recognition and treatment of acute stroke patients who develop symptoms either outside the hospital (generally presenting to the ED) or after admission to the hospital. Stroke signs and symptoms include, but are not limited to:
   a. Hemiparesis or hemisensory loss
   b. Receptive or expressive aphasia
   c. Hemianopia or complete bilateral visual loss
   d. Gait ataxia with or without subjective dizziness

2. **Last Known Well Time (LKWT)**: Is the hour at which a patient was last known to be without signs or symptoms of stroke; this can be reported by the patient or others. When deficits are noted upon awakening, the time at which patient was last known to be intact before sleep is used as LKWT.

3. **"Acute Stroke"**: Is defined as a neurologic deficit of no more than 24 hours' duration that is attributable to acute focal vascular injury of the central nervous system.

4. This policy applies only to patients 18 years of age or older.

EFFECTIVE DATE: 9/2018 **SUPERSEDES:**
REVISED: 3/19
REVIEWED: 7/18, 9/18, 3/19
REVIEWED COMMITTEE: Stroke Committee

APPROVED BY:

Kim McKenzie, RN, MSN, CPHQ
Chief Executive Officer

Anish Mahajan, MD
Chief Medical Officer

Nancy Blake, PhD, RN, NEA-BC, FAAN
Chief Nursing Officer

5. **Code Stroke:** Utilizes a multidisciplinary team approach to rapidly gather and evaluate patient information and determine candidacy for thrombolytic and endovascular therapy.

6. **Thrombolytic:** A drug, such as Tissue Plasminogen Activator (tPA), that helps dissolve clots in order to restore blood flow and allow reperfusion of viable brain.

7. **NIHSS:** The National Institute of Health Stroke Scale, a standardized neurological examination used for rating stroke severity.

PROCEDURE:

1. Emergency Department Stroke Team Activation: Sends Code Stroke Batch Page:
   a. If a patient with symptoms consistent with an Acute Stroke is identified, any member of the healthcare team shall activate a Code Stroke.

2. Inpatient Code Stroke Activation
   a. In the inpatient setting, a bedside nurse or provider will activate the Rapid Response Team (RRT), who will evaluate the patient for suspected acute stroke.

   b. If a provider suspects the patient is having an acute stroke, he/she will activate a Code Stroke.

For both Emergency Department and inpatient Code Strokes, all clinical staff members are expected to help expedite patient care.

RESPONSE:

I. Code Stroke Team Activation

1. The ED physician or primary physician/RRT provider, depending the location of activation, will evaluate the patient and use one of the available Stroke Order Sets to ensure compliance with stroke guidelines.

2. The ED, RRT or bedside nurse, depending on the location of activation, will ensure that interventions are initiated in accordance with the Stroke Order Sets.

3. The Neurology team physician responding to the Code Stroke will perform and document the NIHSS assessment.

4. **Imaging:** CT Head without contrast should be performed within 20 minutes of patient's arrival in the ED or inpatient Code Stroke activation. The CT scan should be interpreted by an Attending Radiologist within 20 minutes of the completion of the scan.

5. **NIHSS:** The NIHSS must be documented in the medical record by the Neurology physician prior to administration of a thrombolytic agent. A repeat NIHSS must be documented after completion of thrombolytic administration.

6. **Thrombolysis:** The decision to administer thrombolytics will be made jointly between Neurology and Emergency Medicine for ED patients or between Neurology and the primary inpatient team. Before the decision is made to administer thrombolytics, the Neurology physician who has assessed the patient must confer with the Neurology attending on-call. If there is any delay in this discussion for an ED patient, the Emergency Medicine attending may confirm the decision to administer thrombolytics independently.

7. **Consent:** For last known well time (LKWT) of 0 – 4.5 hours, written informed consent is recommended. Consent may be verbal if the patient's condition prevents written consent in a timely manner. Consent may be obtained from a patient's surrogate decision maker, if the patient is unable to communicate or lacks decision-making capacity. However, lack of consent should not delay administration of thrombolytics if the patient is not capable and the decision maker not immediately available.

8. **Thrombolytic administration:** The Neurology team will be generally responsible for ordering and overseeing the administration of tPA. The pharmacist will verify dose and reconstitute tPA for the nurse to administer.

9. Disposition:
   a. All acute stroke patients who have received thrombolytics or endovascular intervention should be admitted to the Intensive Care Unit for at least 24 hours. Patients presenting to the ED and who have been so treated will be admitted to the Neurology Service with almost no exceptions.
   b. Patients who have not received thrombolytics or endovascular intervention will be admitted to a level of care commensurate with their condition. Such patients will be admitted to the Neurology Service if stroke remains the most serious and likely diagnosis.
   c. For patients who develop stroke while already admitted and who have received thrombolytics or endovascular intervention and for whom an ICU bed is not immediately available, the RRT team will render ICU-level care until the patient can be transferred to a suitable ICU setting. Once such therapies have been delivered, the patient will generally be transferred to the Neurology Service after a discussion with the primary team. Even if the patient remains with the primary team, the Neurology Service will be responsible for periodic evaluation of the patient's neurological status and for interval recommendations on the patient's care.

10. Endovascular therapy: During and immediately after the initial assessment for the appropriateness of thrombolytic treatment, the Neurology Service will determine if endovascular intervention for large vessel occlusion is appropriate, in consultation with Interventional Radiology.
    a. If the patient is an appropriate candidate for endovascular therapy and consent for the procedure can be obtained and Harbor-UCLA has capacity to initiate the procedure within one hour, the patient will be sent to the Interventional Suite under the supervision of the Neurology Service.
    b. If the patient is an appropriate candidate for endovascular therapy and consent for the procedure can be obtained and if Harbor-UCLA does not have capacity for an urgent procedure, the Neurology Service will attempt to arrange transfer to an outside comprehensive or endovascular-capable stroke center that can perform the procedure without delay.

Quality Improvement:
The Harbor-UCLA Department of Neurology's Stroke Program will be responsible for ongoing quality improvement and oversight of the following:

1. All Stroke Team activation cases will be reviewed at least quarterly by the Stroke Program Quality Improvement Committee. Aggregate data will be reported to the Department of Neurology and Department of Emergency Medicine at regularly scheduled meetings. Cases raising higher levels of concern will be reported to any involved departments immediately. Appropriate channels (e.g., Safety Intelligence reporting) will be employed as needed.

2. The Stroke Program Quality Improvement Committee will be comprised of representatives from all involved departments.

Collaboration:

Department of Emergency Medicine
Department of Neurology
Department of Radiology
Department of Anesthesia
Department of Neurosurgery
Department of Medicine
Department of Nursing
Hospital Administration
Department of Pharmacy
Laboratory

REFERENCES:

The Joint Commission Primary Stroke Center Guidelines
American Heart Association Guidelines

Revised and Approved by:
Medical Executive Committee on 3/2019

Janine R. E. Vintch, M.D.
President, Professional Staff Association