

General Policy and Procedure
Stroke Treatment and Triage

Therapies are available for acute ischemic stroke that must be administered within three hours of symptom onset. It is important to obtain an accurate history as well as have someone available who can give consent for treatment. Time is vital in these patients, so unnecessary delays must be avoided.

Goals

1. Rapid, simple, directed assessment and pre-hospital identification of stroke patients (non-comatose, non-trauma patients with neurologic complaints, Cincinnati Stroke Scale).
2. Rapidly identify potential stroke patient but exclude common stroke mimics (hypoglycemia, seizure) or those who will not qualify for nor benefit from thrombolytic therapy.
3. Prompt notification of hospital to rapidly mobilize relevant hospital personnel (stroke teams, CT technician, radiologist).
4. Rapid transport and appropriate supportive care.
5. Minimize time interval from 911 call to definitive hospital identification of an acute stroke patient, and increase the number of stroke patients who are eligible for thrombolytics (three hour window from symptom onset).

Pre-Radio

1. Follow General Pre-Hospital Care Protocol.
2. Pre-hospital providers have access to witnesses/bystander and are in a unique position to accurately identify time of onset of symptoms (time patient was last seen normal). Obtain relevant history, including history of prior stroke or head trauma in preceding three months, baseline neurologic function, history of major surgery in preceding two weeks and use of anticoagulants. Encourage family members to accompany patient to hospital to assist in establishing historical information. If declines, obtain name and telephone number of person able to provide history and consent for treatment.
3. Begin transport as soon as possible; do not delay for IV starts.
4. Perform Cincinnati Pre-hospital Stroke Scale (<1 min).

Any ONE finding meets the criteria for stroke:

A. Facial Droop: The patient shows teeth or smiles

Normal: Both side of face move equally

Abnormal: One side of face does not move as well as the other

B. Arm Drift: The patient closes their eyes and extends both arms straight out for 10 seconds

Normal: Both arms move the same or both arms do not move at all

Abnormal: One arm either does not move or one arm drifts down compared to the other

C. Speech: The patient repeats, for example, "The sky is blue in Michigan."

Normal: The patient says correct words with no slurring of words

Abnormal: The patient slurs words, says the wrong words or is unable to speak

5. If the CPSS is abnormal and time of onset is known to be less than three hours, notify receiving hospital as soon as possible about impending arrival of "acute stroke" patient. Give ETA.

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6. Document time of onset of symptoms, time of 911 call, time of arrival on scene, time of departure to hospital and time of arrival at hospital.

MFR/EMT/SPECIALIST/PARAMEDIC

1. Secure and protect affected limbs from injury.
2. Keep head elevated at approximately 15 degrees unless patient is hypotensive.
3. Maintain appropriate body temperature.

SPECIALIST/PARAMEDIC

1. Start IV NS KVO. Avoid large volumes of fluid unless hypotensive.

PARAMEDIC

1. Place patient on cardiac monitor. Monitor respiratory effort and cardiac rhythm.
2. Check blood glucose level. If less than 80 mg/dl, administer Dextrose 5% (D50) 25 gm, IV.
3. If partial or transient response to Dextrose 5% (D50), repeat initial dose.
4. Do not treat hypertension in the pre-hospital setting.

STROKE CENTER (must meet all of the criteria below)

1. 24/7 physician-staff emergency department.
2. 24/7 neuro-imaging capability for stroke with on-site radiologist or tele-radiology for immediate interpretation.
3. 24/7 laboratory services.
4. Capable of initial evaluation including neuro-imaging and laboratory studies within 25 minutes, CT interpretation within 20 minutes of study completion, tPA administration within one hour of arrival.
5. Ability to report the following monthly QI information:
 - A. Number of patients who present to each facility within three hours of the onset of stroke symptoms
 - B. Number of patients treated with tPA
 - C. Time from presentation to treatment
 - D. Reasons patients are not treated when eligible

PARTICIPATING STROKE CENTERS

Chelsea Community Hospital
Genesys Regional Medical Center
SJM-Livingston
SJM-Saline
St. Joseph Mercy Health System
Sparrow Healthcare
University of Michigan Health System

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MCA Approved	02/04			
Implement	11/04			