

**COUNTY OF SACRAMENTO
EMERGENCY MEDICAL SERVICES AGENCY**



Program Document: **Stroke**
Policy Number: 8060.20

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Signature on File
EMS Medical Director

Signature on File
EMS Administrator

Purpose:

- A. To establish a treatment standard for Emergency Medical Technicians and Paramedics in treating patients showing signs or symptoms of a suspected stroke.

Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

Definitions:

- A. **Stroke** - A condition of impaired blood flow to a patient's brain resulting in brain dysfunction, most commonly through occlusion or hemorrhage.
- B. **Onset of Symptoms** - The specific date and time when current symptoms were known to have started.
- C. **Last Known Normal/Well** - When the "onset of symptom" cannot be reliably determined (no witness or a poor historian), the Last Known Well time is the most recent time a reliable historian can say the patient was at their baseline health without current symptoms.
- D. **Wake Up Stroke** - Patient awakens with stroke symptoms that were not present prior to falling asleep.
- E. **Suspected Stroke** - Suspected Stroke with one (1) new onset of lateralizing neurological signs; and/or two (2) unexplained new altered level of consciousness (Glasgow Coma Scale < 14) without response to Glucose, Glucagon, or Naloxone (excluding head injury).

Protocol:

- A. If possible, document a reliable time of day that the patient was last observed to be normal either by the patient or witness. A patient who wakes up with symptoms is considered as having an **UNKNOWN** time of onset.

BLS:

1. Ensure patent airway.
2. Supplemental O₂ as necessary to maintain SPO₂ ≥ 94%. Use the lowest concentration and flow rate of O₂ as possible.
3. Perform Blood Sugar determination.
4. Transport.

ALS:

1. Advanced airway adjuncts as needed.
2. Cardiac Monitoring.
3. Determine Cincinnati Prehospital Stroke Scale (CPSS). Normal response is 0, Abnormal is 1, Maximum Score is 3.
4. Initiate vascular access. If time allows, without delaying transport, initiate a second access line. Minimum 20g in AC when possible.
5. If CPSS is >0, and "last seen normal" *time, including wake-up Stroke, is twenty-four (24) hours or less, perform Los Angeles Motor Score (LAMS):
 - a. LAMS scoring:
 - i) Facial Droop: Absent = 0, Present = 1
 - ii) Arm Weakness: Absent = 0, Drifts = 1, Falls Rapidly = 2
 - iii) Grip Strength: Equal = 0, Weak = 1, No Grip = 2
 - iv) Total Score Range: 0-5
 - b. LAMS score ≤ 3 transport to closest **Stroke Receiving Center**
 - c. Transport to a *****Thrombectomy Capable Center** if:
 - i) LAMS score ≥ 4 **AND**
 - ii) LKWT is ≥ 4.5 hours OR meets any of the following contraindications to lytics:
 - (a) History of Intracranial Hemorrhage
 - (b) History of stroke within the past 3 months
 - (c) Actively taking anticoagulants**AND**
 - iii) Travel time ≤ 30 minutes

6. Prehospital personnel will contact the receiving hospital and clearly announce: "Stroke Alert" and give the following information if available:
 - a. Last time of day observed to be "normal," reported by bystanders.
 - b. Patient's name, date of birth, or medical record number, if known.
 - c. Baseline Mental Status.
7. When possible and safe to do so, transport a family member or Durable Power of Attorney (DPOA) or obtain and relay to the receiving hospital the name/contact information of the individual(s) who can verify the time of onset of symptoms or last known normal/well time.

***If CPSS is=0, OR "last seen normal" time is > twenty-four (24) hours, the patient is NOT a "stroke alert," and destination is per Policy PD# 5050 – Destination.**

*****Note Thrombectomy Capable Centers Include:**

- A. UC Davis Medical Center
- B. Mercy San Juan Medical Center
- C. Kaiser Permanente North
- D. Sutter Sacramento
- E. Sutter Roseville

Cincinnati Prehospital Stroke Scale (CPSS)			
Sign / Symptom	How tested	Normal 0	Abnormal + 1
Facial Droop	Have the patient show their teeth or smile	Both sides of the face move equally	One side of the face does not move as well as the other
Arm Drift	The patient closes their eyes and extends both arms straight out for 10 seconds	Both arms move the same, or both do not move at all	One arm either does not move, or one arm drifts downward compared to the other
Speech	The patient repeats "The sky is blue in Cincinnati"	The patient says correct words with no slurring of words	The patient slurs words, says the wrong words, or is unable to speak

LAMS SCORING	
Assessment Item	Score
Facial Droop	Absent = 0 Present = 1
Arm Weakness	Absent = 0 Drifts = 1 Falls Rapidly = 2
Grip Strength	Equal = 0 Weak = 1 No Grip = 2
Total Score Range	0-5

Cross Reference:

- PD# 2060 – Hospital Services
- PD# 2525 – EMS Radio Report Format
- PD# 5050 – Destination
- PD# 5060 – Hospital Diversion

NOTE:

Accessible version of flowchart(s) will be provided upon request submitted to scemsainfo@saccounty.gov.