

POLICY: 522.20
TITLE: Stroke Triage and Destination

EFFECTIVE: 10/25/2024
REVIEW: 10/2027
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

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STROKE TRIAGE AND DESTINATION

- I. AUTHORITY
Division 2.5, California Health and Safety Code, Sections 1797.67, 1798, 1798.101, 1798.105, and 1798.170, California Code of Regulations, Title 22, Division 9
- II. DEFINITIONS
- A. ALS - means Advanced Life Support, as defined in Section 1797.52, Division 2.5 of the Health and Safety Code.
- B. Comprehensive Stroke Center (CSC) – refers to a hospital that has received comprehensive status through American Heart Association (AHA) and Joint Commission review as well as local EMS agency designation. CSC sites have availability of advanced imaging techniques including Computed Tomography Angiogram/Perfusion (CTA/CTP), Transcranial Doppler (TCD). These facilities have 24/7 availability of personnel, imaging, operating room and endovascular facilities allowing for the management of large ischemic strokes, intracerebral hemorrhage and subarachnoid hemorrhage.
- C. Emergency Medical Services (EMS) - means the services utilized in responding to a medical emergency.
- D. Large Vessel Occlusion (LVO) – refers to the site of an ischemic clot within the brain leading to stroke symptoms. LVO strokes may benefit from transport to a CSC facility per MCEMSA Stroke Destination Policy.
- E. Last Known Well Time (LKWT) refers to the time at which the patient was last known to be without signs and symptoms of the current stroke or at their baseline.
- F. MCEMSA means Mountain Counties EMS Agency.
- G. MCEMSA Stroke Criteria - means a patient stroke assessment using the VAN (vision, aphasia, neglect) assessment resulting in a positive finding.
- H. Primary Stroke Center (PSC) - means a hospital designated to stabilize and treat acute stroke patients, providing initial acute care. PSCs are able to appropriately use thrombolytics and other acute therapies such as stabilizations of vital functions, provision of neuroimaging procedures, and management of intracranial and blood pressures. Based on patient needs and the hospital's capabilities, they either admit patients or transfer them to a comprehensive stroke center.

- I. **Quality Improvement (QI)** - means a method of evaluation of services provided, which includes defined standards, evaluation methodologies and utilization of evaluation results for continued system improvement. Such methods may include, but are not limited to, a written plan describing the program objectives, organizations, scope and mechanisms for overseeing the effectiveness of the program.
- J. **Stroke** - means a condition of impaired blood flow to a patient's brain resulting in brain dysfunction.
- K. **Stroke Alert** - means a notification from the transporting ground or air ambulance to a PSC or CSC that a patient meeting MCEMSA Stroke criteria is being transported to their facility. A Stroke Alert must be made as soon as possible after stroke criteria is confirmed.
- L. **VAN (vision, aphasia, neglect) Assessment** - means a prehospital screening tool used to identify the presence of large vessel occlusive stroke. The patient is deemed to have a positive VAN assessment with any arm weakness and at least one of the following: vision change, aphasia or neglect on exam. A VAN negative exam is either no arm muscle weakness OR the presence of arm muscle weakness without vision, aphasia or neglect findings.

III **PURPOSE**

To rapidly identify suspected acute stroke patients, provide treatment and prompt transport, to the appropriate Primary Stroke Center (PSC) or Comprehensive Stroke Center (CSC) for rapid evaluation and treatment.

IV. **POLICY**

A. **STROKE SYSTEM TRIAGE**

- 1. Appropriate triage of the suspected acute stroke patient using stroke alert criteria relies on rapid prehospital care:
 - a. Recognition of signs and symptoms of stroke using VAN assessment for LVO.
 - b. Determination of time last known well without stroke symptoms within the past 24 hours by a reliable historian.
 - c. Complete Fibrinolytic Checklist.
- 2. Stroke Alert notification to PSC or CSC to report positive stroke assessment findings.

B. **DESTINATION**

- 1. Suspected acute stroke patients shall be transported to the appropriate PSC or CSC within the following parameters:
 - a. If the patient is found to be **VAN positive**, the patient may be transported directly to a CSC if the following criteria are met:
 - i. Last known well time is within 24 hrs.
 - ii. Transport time to the CSC will not exceed 60 minutes.
 - iii. Transport time will not take the patient out of the 4.5-hour window for thrombolytic therapy from onset of symptoms or LKWT.
 - iv. No "comfort measures only" POLST.

- b. If the patient is found to be **VAN negative**, the following transport criteria shall be followed:
 - i. If the patient does not have a preference, the patient shall be transported to the nearest PSC or CSC
 - ii. If transport to a PSC or CSC is estimated to be greater than twenty (20) minutes, the patient shall be transported to the nearest ED facility capable of receiving stroke patients.
 - iii. All emergency departments can receive stroke patients.
 - c. Paramedics in MCEMSA should exercise their judgment and request air transport (if available) for stroke patients to a PSC or CSC.
 - d. Unstable stroke patients shall be transported to the closest emergency department. Unstable stroke patients are defined as any ONE of the following:
 - i. Patients undergoing CPR or with rapidly deteriorating vitals signs where CPR will likely be initiated during transport.
 - ii. Inability to ventilate and/or oxygenate the patient using a bag valve mask with a BLS airway adjunct or advanced airway.
2. A PSC/CSC may request advisory status through the EMS Duty Officer for incoming stroke patients only when:
 - a. The PSC/CSC is on internal disaster; or
 - b. Inoperable CT/MRI.
 3. Patients should be taken directly to the CT scanner.
 - a. The patient is to remain on cardiac monitor if taken directly to the CT. The patient will remain on the cardiac monitor until Paramedic transfers patient care.
 - b. Paramedic will give report to the nurse transfer patient directly from gurney to CT scanner platform and return to service.
 - c. If there is any delay, such as CT scanner not being readily available, the paramedic will not be expected to wait. The patient will be taken to a monitored bed and report given to a receiving nurse or physician as is customary.

C. STROKE ALERT/PATIENT REPORT

1. As soon as a suspected LVO stroke patient is confirmed with the VAN assessments, the appropriate destination shall be determined, and a Stroke Alert promptly communicated to the PSC/CSC and/or the closest receiving facility. The Stroke Alert is to contain the following information:
 - a. Identify the call as a “Stroke Alert” and verify CT operability.
 - b. Provide estimated time of arrival (ETA).
 - c. Patient’s age and gender.
 - d. Give time patient was last seen without stroke symptoms (Last Known Well Time).

- e. VAN assessment result-negative or positive.
 - f. Blood Glucose and Vital Signs.
 - g. Treatment and response to treatment.
 - h. Contraindications to fibrinolytic therapy.
2. Electronic Patient Care Report(ePCR) documentation must include:
- a. Last known well time
 - b. VAN assessment results,
 - c. Blood glucose check
 - d. Neurological assessments
 - e. Factors that determined patient destination