PURPOSE
To reduce the morbidity and mortality related to stroke by organizing a system of stroke centers to serve our residents and visitors through preventative education, emergency care, hospitalization, rehabilitation, and research. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.

AUTHORITY
California Health and Safety Code - Division 2.5: Emergency Medical Services [1797.107, 1798.150]
California Code of Regulations, Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7.2 Stroke Critical Care System

STROKE RECEIVING CENTER DESIGNATION LEVELS

Acute Stroke Ready Hospital (ASR)
A hospital able to provide the minimum level of critical care services for stroke patients in the emergency department and are paired with one or more hospitals with a higher level of stroke services.

Primary Stroke Center (PSC)
A hospital that treats acute stroke patients and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.

Thrombectomy-capable Stroke Center (TSC)
A stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.

Comprehensive Stroke Center (CSC)
A hospital with specific abilities to receive, diagnose and treat all stroke cases and provide the highest level of care for stroke patients.

DESIGNATION BY REMSA AS A STROKE CENTER
Initial REMSA Designation as a Stroke Center in the EMS System requires an application, satisfactory site survey and verification of the following:
1. Currently serving in the EMS system as a Prehospital Receiving Center (PRC) or a Base Hospital (BH).
2. Compliance with all standards and requirements listed in this policy.
3. Compliance with all requirements listed in Title 22, Division 9, Chapter 7.2- Stroke Critical Care System, for the requested level of designation.
4. Current certification as an Acute Stroke Ready Hospital, Primary Stroke Center, Thrombectomy-capable Stroke Center, or Comprehensive Stroke Center from one of three CMS-approved accreditation organizations (The Joint Commission (TJC), Det Norske Veritas (DNV) or the Accreditation Commission for Healthcare (ACHC)).
   a. Certification must match the level of stroke center designation.
   b. If certification is in process, the applying hospital shall provide REMSA with a copy of the certification within thirty (30) days of receipt.
   c. Continued designation shall depend on re-certification as specified by the certifying organization and a copy of the renewal certificate shall be provided to REMSA not less than 30 days prior to expiration of current certification.
5. Enrollment and participation in the stroke data management system and commitment to provide additional data as required by REMSA and/or the Stroke System Advisory Committee.
6. Current written agreement with REMSA for designation as a Stroke Center to provide services in Riverside County.

**Designation Renewal**

1. The Stroke Center may be re-designated after satisfactory review of written documentation and a site survey by REMSA personnel/designees.
2. Re-designation shall occur every three (3) years. REMSA staff will attend and perform Stroke Center audits during one (1) entire Joint Commission, Det Norske Veritas (DNV) or Accreditation Commission for Healthcare (ACHC) site visit within a three-year designation contract cycle.
3. Failure to comply with the criteria outlined in this policy at any time will result in disciplinary action up to and including suspension or rescission of EMS Stroke Center designation.

**STROKE CENTER STANDARDS FOR ALL HOSPITALS DESIGNATED BY REMSA AS A STROKE RECEIVING CENTER**

**Staffing Requirements**

1. Stroke Centers shall staff the following positions:
   a. **Stroke Program Medical Director:**
      i. A board-certified physician in neurology or neurosurgery or another board with sufficient experience and expertise dealing with cerebrovascular disease as determined by the hospital credentialing committee that is responsible for the stroke service, performance improvement, and patient safety programs related to a stroke critical care system.
   b. **Stroke Program Manager:**
      i. A registered nurse who is designated by the hospital and is responsible for monitoring, coordinating, and evaluating the stroke program.
      1. In the event that an interim Program Manager is needed in the absence of a full-time Program Manager, a nurse from the hospital may be selected to fulfill the obligations and duties of the role for no more than one hundred-eighty (180) days. Should a full-time Program Manager not be assigned by the conclusion of the interim period, REMSA will perform an evaluation of the position and program to ensure compliance with state regulation(s), REMSA policy, and contract language.
   c. **Clinical Stroke Team:**
      i. A team of healthcare professionals who provide care for the stroke patient and may include, but is not limited to, neurologists, neuro-interventionists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.
   d. **Registrar:**
      i. One full-time equivalent registrar dedicated to the registry must be available to process the data capturing the California Stroke Registry/Coverdell, GWTG, and REMSA data sets for each 500–750 patients in the registry. This staffing need increases if additional data elements are collected.

**Data Collection and Submission**

1. Stroke Centers shall:
   a. Participate in the stroke data management system.
   b. Submit data to REMSA via the REMSA approved data collection method and on the schedule agreed upon by the Stroke System Advisory Committee.
   c. Collect additional data as required by REMSA and/or the Stroke System Advisory Committee.

**Performance Standards**

1. Written EMS policies and procedures shall be revised within thirty (30) days as Continuous Quality Improvement (CQI) determines that changes need to be made to individual policies and shall be reviewed, as a whole, at a minimum of every two (2) years.
2. Stroke Centers must maintain the uninterrupted ability to perform advanced imaging, laboratory services, and treatment capabilities commensurate with the requirements for their level of designation. Imaging, laboratory, and treatment modalities shall be on site and available at all times, except for periods of approved internal disaster.
   a. To ensure uninterrupted services, the following equipment is required:
      i. Primary, Thrombectomy-capable, and Comprehensive stroke centers must have a minimum of two (2) CT scanners and one (1) MRI scanner.
ii. Thrombectomy-capable and Comprehensive centers must have a minimum of two (2) interventional suites capable of performing mechanical thrombectomy and/or neuro-endovascular procedures.

b. In the event that the required capabilities cannot be maintained and an interruption in service occurs, the REMSA Duty Officer must be called immediately.
   
i. REMSA does not allow stroke diversions. When a stroke center is placed on “Diversion” in the ReddiNet, their stroke program will be suspended until an evaluation occurs regarding the circumstances that caused the interruption in service. The stroke center will be permitted to continue receiving suspected stroke patients only after a completed evaluation and re-approval by REMSA.

3. Additional performance measures as determined by REMSA and/or the Stroke System Advisory Committee.

4. The stroke center shall establish adequate procedures for self-monitoring and quality control and assurance in compliance with standards in this policy on a continuous basis. Documentation of such efforts shall be made available to REMSA upon request.

Education

1. Provide stroke related continuing education to EMS personnel, the clinical stroke team, and related hospital staff; annually report these activities to REMSA. A minimum of 2 educational events annually is required.

2. Provide stroke education to the public; and annually report these activities to REMSA.

Stroke System Participation

1. Stroke Center representatives shall actively participate as members of the Stroke System Advisory Committee.

2. Stroke Centers shall maintain CMS-approved accreditation equivalent with their level of designation.

3. Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected stroke cases.

Hospital Services / Obligations

The hospital shall meet the following requirements:

1. The hospital shall have established protocols for stroke services including triage, diagnosis, and stroke team activation following field notification of an inbound suspected stroke patient.

2. The hospital shall have a single call activation system to activate the stroke team directly.

3. The hospital shall have a process in place for the treatment and triage of simultaneously arriving stroke patients.

4. A dedicated audio recorded phone line or radio system, capable of being answered twenty-four (24) hours per day, seven (7) days per week, used by paramedics to notify facility of incoming stroke patients.
   
a. Maintain such recordings for a minimum of one (1) year, and use such recordings exclusively for auditing, continuing education and review approved by REMSA.

b. Maintain a backup recording system in the event that the primary recording system fails.

Reporting Requirements

1. Stroke Center shall notify REMSA in writing of any failure to meet these EMS Stroke Center Standards within 10 (ten) business days.

2. Changes to key Stroke Center personnel shall be reported to REMSA within 10 (ten) business days to include:
   
a. Stroke Program Medical Director

b. Stroke Program Manager