



STROKE-NEUROLOGY RECEIVING CENTER CRITERIA

I. AUTHORITY:

Health and Safety Code, Division 2.5, Section 1798.170; CCR, Title 22, Division 9, Chapter 7.2.

II. APPLICATION:

This policy establishes a stroke critical care system and defines the requirements for designation as an Orange County Stroke-Neurology Receiving Center (SNRC). These centers meet the State definition of Comprehensive Stroke Centers and receive patients transported by the emergency medical services system with signs and symptoms of acute cerebral vascular accident that may benefit by rapid assessment and treatment at a dedicated stroke specialty center.

A SNRC will provide specialized cerebral vascular services for patients presenting via the 9-1-1 system or by emergency interfacility transfer from an Orange County Emergency Medical Services (OCEMS) Emergency Receiving Center assigned to that SNRC. Patients eligible for 9-1-1 field triage or transfer to a SNRC include those who meet OCEMS criteria for triage as an acute ischemic or hemorrhagic cerebral vascular event. Patients with trauma related cranial-cerebral events that meet trauma triage criteria will be managed in the OCEMS Trauma System.

III. DESIGNATION:

A. Initial Designation Criteria:

1. Hospitals meeting Title 22 requirements and designated as an Emergency Receiving Center (ERC) that are in good standing and interested in designation as a Stroke-Neurology Receiving Center (SNRC) must submit a request to OCEMS.
2. OCEMS will evaluate the request and determine the need for an additional SNRC. If such need is identified, OCEMS will request the interested hospital to provide:
 - a. Policies, procedures and agreements as described in Section VI, of this policy.
3. OCEMS will review the submitted material, perform a site visit, and meet with the hospital representatives. In addition, the following information will be collected by OCEMS and considered in the designation process:
 - a. Emergency Department diversion statistics during the past three years.
 - b. Emergency Intra-facility transfers during the past three years, including transfers for higher level of care management of acute ischemic and hemorrhagic stroke.
4. Following review, the OCEMS will provide its designation decision to the Facilities Advisory Subcommittee and the Emergency Medical Care Committee for endorsement or denial of endorsement for designation of up to three years as a SNRC.
5. An approved SNRC will have a written agreement as described in Section VI of this policy and pay the established Health Care Agency fee.
6. OCEMS will identify ERCs to be assigned to each of the SNRCs (650.05 Attachment #1). This will serve as demonstration of transfer agreements between ERCs and SNRCs.

B. Continuing Designation

1. OCEMS will review each designated SNRC for compliance to criteria as described in this policy every three years or more often if deemed necessary by the OCEMS Medical Director. Each SNRC will be required to submit specific written materials to demonstrate evidence of



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2. compliance to criteria established by this policy and pay the established fee. A site visit may be required at the discretion of the OCEMS Medical Director.
 3. OCEMS will provide its designation decision to the Facilities Advisory Subcommittee and the Emergency Medical Care Committee for endorsement or denial of endorsement for continued designation of up to three years.
- C. Change in Ownership / Change in Executive or Management Staff
1. In the event of a change in ownership of the hospital, continued SNRC designation will require adherence to this policy with review and approval of continued designation by the OCEMS Medical Director. Change in hospital ownership may require redesignation by OCEMS.
 2. OCEMS shall be notified, in writing, at least 10 days prior to the effective date of any changes in key SNRC personnel as identified in Section IV, (A) and (B) below.
- D. Denial / Suspension / Revocation of Designation
1. OCEMS may deny, suspend, or revoke the designation of a SNRC for failure to comply with any applicable OCEMS policy or procedure.
 - a. Failure to comply with data submission requirements for three (3) consecutive months can result in automatic suspension of SNRC designation.
- E. Cancellation of Designation by SNRC
1. SNRC designation may be canceled by the SNRC upon 90 days written notice to OCEMS.
- IV. MEDICAL PERSONNEL:
- A. SNRC Medical Director
1. The hospital will designate a medical director for the Stroke-Neurology Program who is currently licensed as active and in good standing by the California Medical Board and is board-eligible or board-certified in neurology, neurosurgery, or another board with sufficient experience and expertise dealing with strokes as determined by the hospital credentialing committee. For board-eligible physicians, board certification must be obtained within the allowed time by ABMS from the first appointment.
 2. Responsibilities of the Medical Director include:
 - a. Development of hospital policies as defined in Section VI, part F.
 - b. Development and maintenance of the hospital SNRC performance/quality improvement plan.
 - c. Development and maintenance of a stroke-neurology continuing education program within the hospital with an offering of yearly Category 1 CME for physicians and BRN-approved continuing education hours for nursing staff.
 - d. Attendance at county-wide SNRC system meetings.
- B. SNRC Coordinator
1. A Registered Nurse will serve as the Stroke-Neurology Coordinator who may also be the critical care department director, emergency department director, or other similar position.
 2. Responsibilities of the SNRC Coordinator include:
 - a. Development of nursing stroke education programs (standardized national programs are acceptable to fulfill this responsibility).



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- b. Integration and documentation of inpatient acute rehabilitation services offered to SNRC patients.
 - c. Collection and reporting of required data to OCEMS as specified in Section VII of this policy and Policy 650.10.
 - d. Attendance at the hospital SNRC performance/quality improvement program meetings.
 - e. Development of a stroke-neurology education and outreach program for the local community and assigned regional hospitals.
- C. On-Call Physician Specialists / Consultants
1. A board-eligible or board-certified Emergency Medicine specialist will be available in-house at all times. For board-eligible physicians, board certification must be obtained within the allowed time by ABMS from the first appointment.
 2. The following physician specialists will be on-call as documented by a written schedule and available to consult for SNRC patients within thirty minutes 24/7:
 - a. Stroke neurologist board eligible or board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry, or with appropriate education and experience as defined by the hospital credentials committee.
 - i. All persons experiencing an acute stroke who are admitted for stroke treatment as an inpatient to a SNRC must be evaluated and treated by an in-person stroke neurologist. Tele-neurology is not approved for this service. Tele-neurology may be used in the emergency department to determine if a stroke patient should receive TNK/thrombectomy or other therapy. The in-person requirement does not apply to patients admitted for other reasons who subsequently suffer an acute stroke.
 - b. Neurosurgeon board-eligible or board-certified by the American Board of Neurological Surgery.
 - c. A radiologist board-eligible or board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology. Use of tele-radiology may satisfy this criteria but all staffing and staff qualification requirements shall remain in effect and be documented by the hospital.
 - d. Neurointerventionalist board-eligible or board certified by the American Board of Radiology, American Osteopathic Board of Radiology, American Board of Psychiatry and Neurology, the American Osteopathic Board of Neurology and Psychiatry or the American Board of Neurological Surgery.
- D. Additional Personnel :
1. Experienced nursing and technical laboratory staff with training in neuroendovascular interventional laboratories. Neuroendovascular personnel must have demonstrated competency in treating acutely ill neurologic patients.
 2. A dedicated neuroendovascular interventional laboratory team to perform neuroendovascular procedures with an on call schedule for operation of the neuroendovascular laboratory 24 hours per day, 365 days per year.
 3. Neuroendovascular laboratory team available within 30 minutes of notification.
 4. Intensive Care Unit staffed at all times by nurses and supported by licensed independent practitioners on-site and as needed, who have demonstrated competency in providing care for neuro-critical care patient populations (including neuroendovascular intervention patients).



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5. A neuro-radiologist board-eligible or board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology is available for consultation. Use of teleradiology may satisfy this criteria but all staffing and staff qualification requirements shall remain in effect and be documented by the hospital.

V. HOSPITAL SERVICES:

In addition to those services required of an Emergency Receiving Center, the SNRC will provide the following:

- A. Laboratory services available 24/7 with ability to deliver results within 45 minutes following ED patient arrival or diagnosis of acute stroke.
- B. Comprehensive inpatient acute rehabilitation services available (on-site or by written transfer agreement) for all patients referred to the hospital through the OCEMS Stroke-Neurology triage system.
- C. A stroke education program available to hospital staff, other regional hospital staffs, EMS personnel and the public, provided at the appropriate educational level for each group.

VI. HOSPITAL POLICIES / AGREEMENTS:

- A. The hospital will have a written agreement with OCEMS indicating the concurrence of hospital administration and medical staff to meet the requirements for SNRC program participation as specified in this policy.
- B. At all times (excepting closure due to internal disaster, closed CT scanner, encumbered thrombectomy team, encumbered neurologic specialist, or unavailable thrombectomy suite) the SNRC will agree to accept all patients meeting OCEMS Stroke-Neurology System triage criteria. Transfers of acute Stroke-Neurology patients to a Stroke-Neurology center from one of that Center's spoke hospitals should be accepted for rapid or direct admission by the Stroke-Neurology Center. When closed solely due to ED diversion, the SNRC will continue to accept stroke patients from spoke hospitals.
- C. The hospital will have written procedures for provision of 24/7 computerized tomography angiography, magnetic resonance angiography, cerebral perfusion study neuroradiology, catheter angiography, neurology emergency department call panel with response policy, and hospital guidelines and process definition for administration of thrombolytics approved by the U.S. Food and Drug Administration for treatment of acute ischemic stroke. The hospital will also provide carotid duplex ultrasonography, transcranial doppler, transesophageal echocardiography, and transthoracic echocardiography when clinically necessary in a clinically appropriate timeframe.
- D. The hospital will have 24/7 neurosurgical call panel coverage for consultation and the emergency department.
- E. The hospital will have 24/7 neuro-intervention capability for treatment of acute ischemic stroke and hemorrhagic stroke as appropriate.
- F. The SNRC will have formal written policies which address the following:
 1. An Emergency Department Response Plan for victims of possible acute cerebral vascular accident. Such plan must include:



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- a. Requiring a patient be seen by the stroke team in person or via telehealth within 15 minutes of ED arrival or diagnosis of potential acute stroke, performing neuro-imaging within 25 minutes, and interpreting the images within 45 minutes.
 - b. Defining patients who are eligible to receive emergent thrombolytic or mechanical therapy for acute ischemic stroke and process diagram for activation of Stroke Team.
 - c. Treatment pathway protocols (may be electronic or written format) for management and treatment of acute ischemic and hemorrhagic stroke victims using FDA-approved drugs or devices.
 - d. Hospital Policy(s) defining telemedicine procedures and Medical Staff Committee (Office) criteria for telemedicine credentialing of members of the medical staff.
2. A performance / quality improvement plan that is incorporated into the hospital's quality improvement program which monitors activities involving the SNRC. A summary of QI findings relevant to the Orange County SNRC system must be submitted annually to OCEMS by March 30 for the preceding calendar year.
 3. Defined methods for collecting and reporting required Stroke-Neurology System data elements to OCEMS within the specified time frame.
 4. Defined stroke-neurology education and outreach program for the local community and assigned regional hospitals.
- G. Participate in a stroke patient research program.

VII. DATA COLLECTION:

- A. Participation is required in the Orange County Medical Emergency Data System (OC-MEDS) for the management of prehospital data including all Stroke-Neurology related functions.
- B. Stroke-Neurology data shall be made available to OCEMS for medical review (All patient information shall be confidential)
- C. The hospital shall submit patient related information to the specialty patient care registry (i.e. the OCEMS Stroke Registry) pursuant to OCEMS Policy 300.50 for all Stroke-Neurology designated patients whether or not the patient is transported by the 911 system (ALS or BLS) or IFT-ALS transport.

VIII. QUALITY ASSURANCE / IMPROVEMENT:

- A. The Quality Assurance/Improvement program will include OCEMS selected performance measures or indicators specific to the SNRC System.
 1. OCEMS will establish a multidisciplinary Stroke Quality Improvement Advisory Committee including both prehospital and hospital members. Representatives of all designated stroke centers and prehospital provider agencies involved in the stroke system shall participate in the QI process.
 2. At a minimum, will review stroke-related deaths, major complications, and transfers.
- B. The hospital SNRC performance/quality improvement program may suggest measures and indicators to OCEMS but will at least include evaluation of program structure, process, and outcome.



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- C. As appropriate, specific SNRC outcomes will be used to compare with national and local performance standards to determine SNRC system performance.
- D. An annual log of community outreach projects will be maintained by the SNRC describing those actions that are:
 - 1. Community oriented.
 - 2. Regional hospital oriented.
- E. The quality improvement process shall comply with the California Evidence Code, Section 1157.7 to ensure confidentiality and disclosure protection.

Approved:

 Carl H. Schultz, MD
 OCEMS Medical Director

 Tammi McConnell, MSN, RN
 OCEMS Administrator

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