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POLICY MEMORANDUM 6613

Implementation Date: NOVEMBER 1, 2020

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REVIEWED/APPROVED BY:

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SUBJECT: SOLANO COUNTY STROKE SYSTEM

AUTHORITY:

California Health and Safety Code Sections 1797.204 and 1797.220
California Code of Regulations, Title 22, Section 100270.220

PURPOSE:

This policy shall provide the basic outline of the Stroke System in Solano County including, but not limited to, stroke system definitions, system designation and participation, stroke data collection and management, coordination of stroke care with neighboring jurisdictions, and quality improvement. To be considered eligible for designation as a stroke center, hospitals must participate in the Solano County Stroke System by meeting the guidelines outlined in this policy.

I. STROKE RECEIVING CENTER DESIGNATION LEVELS

- A. 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 is paired with one or more hospitals with a higher level of stroke services.
- B. Primary Stroke Center (PSC): A hospital that treats acute stroke patients and identifies patient who may benefit from transfer to a higher level of care when clinically warranted.

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

II. DESIGNATION BY SOLANO EMS AS A STROKE CENTER

- A. Designation Process: Initial designation as a Stroke Center in the Solano EMS System requires an application, satisfactory site survey and verification of the following:
 - 1. Compliance with all standards and requirements listed in this policy.
 - 2. Compliance with all requirements listed in Title 22, Division 9, Chapter 7.2 – Stroke Critical Care System, for the requested level of designation.
 - 3. Current certification as an ASR, PSC, TSC, or CSC from one of the three approved accreditation organizations - The Joint Commission, Det Norske Veritas, or Healthcare Facilities Accreditation Program.
 - 4. Enrollment and participation in the stroke data management system and agreement to provide additional data as required by Solano EMS.
- B. Re-Designation Process
 - 1. The Stroke Center may be re-designated after satisfactory review of written documentation and a site survey by Solano EMS Agency staff.
 - 2. Re-designation shall occur annually with a tri-annual site survey, conducted by Solano EMS Agency staff.
 - 3. Failure to comply with the criteria outlines in this policy at any time will result in disciplinary action up to and including suspension of designation as a Stroke Center.

III. STROKE SYSTEM PARTICIPATION

- A. Stroke Centers shall have established protocols for stroke services including triage, diagnosis, and stroke team activation following field notification of an inbound potential acute stroke patient.
- B. Stroke Centers 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 Solano EMS upon request.
- C. Stroke Centers shall have a single call activation system to activate the clinical stroke team directly.
- D. Stroke Centers shall have a process in place for the treatment and triage of simultaneously arriving stroke patients.

- E. Stroke Centers shall participate in the Solano EMS stroke data management system.
- F. Stroke Centers shall have a dedicated audio recorded phone line or radio system capable of being answered 24/7 used by paramedics to notify facility of incoming stroke patients.
- G. Stroke Center representatives shall actively participate as members of the Advisory Committee.
- H. Stroke Centers shall maintain CMS-approved accreditation equivalent with their level of designation.
- I. Stroke Centers will demonstrate compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality and a disclosure protected review of selected stroke cases.
- J. Stroke Centers will report changes of key Stroke Center personnel to Solano EMS within ten business days. These personnel include the Stroke Program Medical Director and the Stroke Program Manager.

IV. GENERAL GUIDANCE FOR FIELD OPERATIONS

- A. Solano County Paramedics will follow the Solano County Stroke Triage Policy and Algorithm (attached) when determining a stroke patient's destination. Mode of transportation will be based on, but not limited to, the following factors: time of day, day of week, traffic, scene location, distance to Stroke Center, and resource availability. The patient will then be transported to the closest appropriate facility.

V. STROKE CENTER STANDARDS: STAFFING REQUIREMENTS

- A. Stroke Program Medical Director: A board-certified neurologist, neurosurgeon, interventional neuro-radiologist, or other board-certified physician with sufficient experience and expertise dealing with cerebrovascular disease as determined by the hospital credentialing committee will serve as the Stroke Program Medical Director. Responsibilities of the Medical Director include:
 - 1. Development of hospital policies.
 - 2. Development and maintenance of the hospital Stroke Program performance and quality improvement plan.
 - 3. Development and maintenance of a Stroke Continuing Education Program with the California Board of Registered Nursing and the Medical Board of California approved continuing education hours for physicians and nursing staff.
 - 4. Attendance and participation in the Advisory Committee and Physician's Advisory Forum and other county-wide system meetings.
- B. Stroke Program Manager: A registered nurse or another qualified individual will serve as the Stroke Program Manager, a requirement for PSC, TSC, and CSC designated facilities. Responsibilities of the Program Manager include:

1. Development of stroke education programs for hospital staff and EMS personnel.
 2. Integration and documentation of inpatient acute rehabilitation services offered to stroke patients.
 3. Collection and reporting of required data to Solano EMS.
 4. Attendance and participation in Advisory Committee and other county-wide system meetings.
 5. Development of a stroke public education and community outreach program.
- C. Clinical Stroke Team: The team of healthcare professionals who provide care for the stroke patient may include, but is not limited to, neurologists, neuro-interventionalists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, physician assistants, nurse practitioners, pharmacists and technologists. Responsibilities of the clinical stroke team include:
1. For ASR designated facilities, response within 20 minutes of a potential acute stroke patient's arrival to the emergency department or diagnosis in the hospital.
 2. For PSC, TSC and CSC designated facilities, response within 15 minutes of a potential acute stroke patient's arrival to the emergency department or diagnosis in the hospital is required.
- D. Neurosurgical Team: For facilities pursuing CSC designation, a neurosurgical team capable of assessing and treating complex stroke and stroke-like syndromes must be available 24/7. The team must include a qualified neuro-radiologist in addition to other qualified personnel. A written call schedule must be developed for attending neurointerventionalist, neurologist, and neurosurgeon providing 24/7 availability and be provided to Solano EMS upon request.

VI. STROKE CENTER STANDARDS: SERVICE REQUIREMENTS

A. Time Frames

1. ASR Designated Facilities
 - a. A CT or MRI scan must be initiated and reviewed within 45 minutes of patient arrival in the emergency department; this intervention may be completed by a radiologist, neurologist, or neurosurgeon.
 - b. Lab services must be performed and results reviewed by a physician within 60 minutes of patient arrival in the emergency department.

- c. Neurosurgical services must be provided directly or under a transfer agreement with a TSC or CSC within three hours of the patient's arrival to the emergency department.

2. PSC, TSC, CSC Designated Facilities

- a. A CT scan must be initiated within 25 minutes and reviewed within 45 minutes of patient arrival in the emergency department; this intervention may be completed by a radiologist, neurologist, or neurosurgeon.
- b. Lab services must be performed and results reviewed by a physician within 45 minutes of patient arrival in the emergency department.
- c. PSC designated facilities: Neurosurgical services must be provided directly or under a transfer agreement with a TSC or CSC within two hours of the patient's arrival to the emergency department.

B. Facility Capacity

1. Stroke Centers must maintain the uninterrupted ability to perform advanced imaging, laboratory services, and treatment interventions that are consistent with the requirements for their level of designation. Imaging, laboratory, and treatment modalities shall be on site and available at all times.
2. Stroke Centers must have the capability of accepting multiple stroke patients simultaneously and provide the required patient placement consistent with their level of designation.

C. Rehabilitation Services

1. Stroke Centers pursuing PSC or TSC designation must provide acute care rehabilitation services.
2. Stroke Centers pursuing CSC designation must provide comprehensive rehabilitation services on-site or have written transfer agreements in place with neighboring facilities that can provide these services

VII. STROKE CENTER STANDARDS: STROKE SYSTEM PARTICIPATION

A. Educational Requirements

1. Stroke Centers will provide stroke related continuing education to EMS personnel, the clinical stroke team, and related hospital staff. A minimum of two educational events are required per year. These activities will be reported to Solano EMS on an annual basis.
2. Stroke Centers will provide stroke education to the public and report these activities to Solano EMS on an annual basis.

B. Transfer Agreements

1. Stroke Centers, designated at or below the TSC level, must have written transfer agreements with higher level centers for neurosurgical emergencies when clinically warranted.
2. Stroke Centers pursuing CSC designation must have written transfer agreements with all PSC's in the region to receive transfers. Additionally, CSC's will provide guidance and continuing stroke specific education to PSC's they have transfer agreements with.

C. Data Collection and Submission

1. Stroke Centers shall participate in the stroke data management system and submit stroke data reports and analysis to Solano EMS via the Agency approved data collection method and in accordance with the agreed upon schedule.
2. Stroke Centers shall provide additional data as required by Solano EMS and will notify the Agency of any unusual occurrences or other significant matters.
3. Stroke Centers located in neighboring jurisdictions which are not designated by Solano County are responsible for conducting quality improvement activities in accordance with the requirements of their designation contracts. Representatives from these Stroke Centers located in neighboring jurisdictions are invited to:
 - a. Submit stroke reports and analysis regarding patients received from Solano County to the Solano EMS Agency as appropriate.
 - b. Notify Solano EMS of unusual occurrences or other significant matters.
 - c. Participate in the Solano EMS Advisory Committee upon request.

D. Quality Assurance and Improvement

1. Stroke System quality improvement and evaluation will be conducted by an improvement team comprised of local BLS and ALS providers, local receiving hospitals, and receiving Stroke Centers. Feedback will be directed to the appropriate individual, agency, or committee.
2. Evaluation parameters will include, at a minimum, measurements of stroke on scene time and transport times, determination of over triage and under triage rates, determination of preventable deaths, complications, average patient ages, lengths of stay, Intensive Care Unit days, and discharge status.

VIII. STROKE CENTER STANDARDS: COMMITTEE OVERSIGHT

- A. Purpose and Participation
1. An advisory committee will be convened on a recurrent basis to evaluate the stroke system in Solano County, share best practices and recommend improvements, and work collaboratively with members of the local EMS system to achieve improved patient outcomes. The committee will evaluate the cumulative stroke data the Agency collects and specific cases which have some benefit to the various providers in our system. The committee will meet on a recurrent basis; refer to policy 1755.
- B. Composition: Advisory Committee membership is comprised of the following:
1. Solano EMS Agency staff including, but not limited to, the EMS Medical Director, EMS Administrator, and other EMS staff as directed. The committee is chaired by the Solano EMS Agency Medical Director and/or the EMS Administrator.
 2. Designated Stroke Centers' Stroke Medical Directors and Stroke Program Managers.
 3. ALS Providers' and Air Ambulance Providers' Operations Manager and CQI Coordinators.
 4. Additional participants may be invited on occasions that warrant their input.
- C. Committee Responsibilities
1. Review of quarterly data for accuracy, completeness, and timely submission.
 2. Provision of feedback to EMS personnel.
 3. Review and comment on any policy changes.
 4. Communication with Solano EMS on all issues, concerns, and ideas regarding the Prehospital Stroke System.
- D. Case Selection
1. Cases will be selected by the EMS Specialty Care Supervisor and/or EMS Coordinator in consultation with the EMS Medical Director for review at the Advisory Committee meeting. In general, the following types of cases will be selected: stroke death cases, patients transported to local hospital or ASR and subsequently transferred to a higher-level Stroke Center.

E. Confidentiality

1. All proceedings, documents, and discussions of the Advisory Committee, and its subcommittees are confidential and protected under Sections 1040 and 1157.7 of the Evidence Code of the State of California. The prohibition relating to discovery or testimony provided in Section 1157 shall be applicable to proceedings and records of any committee established by a local governmental agency to monitor, evaluate, and report on the necessity, quality, and level of specialty healthcare services, including but not limited to, stroke care service provided by a hospital and designated by a local health jurisdiction.
 2. All members and guests sign a confidentiality agreement stating that they will not divulge or discuss publicly information obtained through Advisory Committee membership. The Committee Chair is responsible for obtaining a signed confidentiality agreement from the guest prior to participation.
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