POLICY: 535.10
TITLE: Trauma Center Standards

EFFECTIVE: 4/13/17
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SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

Trauma Center Standards

I. AUTHORITY

Division 2.5, California Health and Safety Code, Section 1798.162, 1798.163, 1798.164, and 1798.165. California Code of Regulations (CCR) Section 100255, 100257, 100259, 100263, and 100264.

II. DEFINITIONS

A. **"Emergency Department" or "Emergency Room"** means the area of a licensed general acute care hospital that customarily receives patients in need of emergency medical evaluation and/or care.

B. **"Trauma Center" or "Designated Trauma Center"** means a licensed hospital, accredited by the Joint Commission on Accreditation of Healthcare Organizations, which has been designated as a Level I, II, III, or IV trauma center and/or Level I or II pediatric trauma center by the local EMS agency, in accordance with CCR.

C. **"Immediately" or "Immediately Available"** means a) unencumbered by conflicting duties or responsibilities; b) responding without delay when notified; and c) being physically available to the specified area of the trauma center when the patient is delivered in accordance with MVEMSA policies and procedures.

D. **"On-call"** means agreeing to be available to respond to the trauma center in order to provide a defined service, as defined by Policy 535.30 (Trauma Team Availability and Activation – Level II Centers).

E. **"Promptly" or "Promptly Available"** means responding without delay when notified and requested to respond to the hospital; and being physically available to the specified area of the trauma center within a period of time that is medically prudent and in accordance with MVEMSA Policy 535.30.

F. **"Qualified Specialist" or "Qualified Surgical Specialist" or "Qualified Non-Surgical Specialist"** means a physician licensed in California who is board certified in a specialty by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, a Canadian board or other appropriate foreign specialty board as determined by the American

Board of Medical Specialties for that specialty. Upon request of the Chief of Trauma of a trauma center, a non-board certified physician may be recognized as a "qualified specialist" by the Mountain Valley EMS agency Medical Director upon substantiation of need by a trauma center if:

1. The physician can demonstrate to the appropriate hospital body and the hospital is able to document that he/she has met requirements which are equivalent to those of the Accreditation Council for Graduate Medical Education (ACGME) or the Royal College of Physicians and Surgeons of Canada;

2. The physician can clearly demonstrate to the appropriate hospital body that he/she has substantial education, training, and experience in treating and managing trauma patients which shall be tracked by the trauma quality improvement program; and

3. The physician has successfully completed a residency program.

G. **"Senior Resident" or "Senior Level Resident"** means a physician licensed in the State of California who has completed at least three (3) years of the residency or is in their last year of residency training and has the capability of initiating treatment and who is in training as a member of the residency program as defined in §100244 of CCR, at the designated trauma center.

H. **"Trauma Receiving Area"** means a designated area within the trauma center that routinely receives and manages the care of trauma patients.

J. **"Trauma Team"** means the multi-disciplinary group of personnel who have been designated to collectively render care for trauma patients at the trauma center.

III PURPOSE

To establish minimum standards for designated trauma centers within the Mountain-Valley EMS system.

IV. POLICY

A. To be designated as a Level II trauma center, a hospital must comply with the standards shown in Appendix 1.

B. To be designated as a Level III trauma center, a hospital must comply with the standards shown in Appendix 2.

C. To be designated as a Level IV trauma center, a hospital must comply with the standards shown in Appendix 3.

Appendix 1

Level II Trauma Care Standards

(§100259 CCR Chapter 7)

1. A trauma program medical director who is a board-certified surgeon, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

    1.1 Recommending trauma team physician privileges;

    1.2 Working with nursing and administration to support the needs of trauma patients;

    1.3 Developing trauma treatment protocols;

    1.4 Determining appropriate equipment and supplies for trauma care;

    1.5 Ensuring the development of policies and procedures to manage domestic violence, elder and child abuse and neglect;

    1.6 Having authority and accountability for the quality improvement peer review process;

    1.7 Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet standards;

    1.8 Coordinating pediatric trauma care with other hospital and professional services;

    1.9 Coordinating with local and State EMS agencies;

    1.10 Assisting in the coordination of the budgetary process for the trauma program; and

    1.11 Identifying representatives from neurosurgery, orthopedic surgery, emergency medicine, pediatrics and other appropriate disciplines to assist in identifying physicians from their disciplines who are qualified to be members of the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of the adult and/or pediatric trauma patient, administrative ability, and responsibilities that include but are not limited to:

    2.1 Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

    2.2 Coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel; and

    2.3 Collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements in CCR Chapter 7, §100263 and provide for coordination with the local EMS agency.

4. A trauma team, which is a multi-disciplinary team responsible for the initial resuscitation and management of the trauma patient.

5. Department(s), division(s), service(s) or section(s) that include at least the following surgical specialties, which are staffed by qualified specialists:

   5.1 General;

   5.2 Neurologic;

   5.3 Obstetric/gynecologic;

   5.4 Ophthalmologic;

   5.5 Oral or maxillofacial or head and neck;

   5.6 Orthopedic;

   5.7 Plastic; and

   5.8 Urologic

6. Department(s), division(s), service(s) or section(s) that include at least the following non-surgical specialties, which are staffed by qualified specialists:

   6.1 Anesthesiology;

   6.2 Internal medicine;

   6.3 Pathology;

   6.4 Psychiatry; and

   6.5 Radiology

7. An emergency department, division, service or section staffed with qualified specialists in emergency medicine who are immediately available.

8. Qualified surgical specialist(s) or specialty availability, which shall be available as follows:

   8.1 A general surgeon capable of evaluating and treating adult and pediatric trauma patients shall be immediately available for trauma team activation and promptly available for consultation;

   8.2 On call and promptly available:

      a. Neurologic;

      b. Obstetric/gynecologic;

c. Ophthalmologic;

d. Oral or maxillofacial or head and neck;

e. Orthopaedic;

f. Plastic;

g. Re-implantation/microsurgery capability. This surgical service may be provided through a written transfer agreement; and

h. Urologic

Requirements (8.1 and 8.2) may be fulfilled by supervised senior residents as defined above who are capable of assessing emergent situations in their respective specialties. When a senior resident is the responsible surgeon:

a. The senior resident shall be able to provide the overall control and surgical leadership necessary for the care of the patient, including initiating surgical care;

b. A staff trauma surgeon or a staff surgeon with experience in trauma care shall be on-call and promptly available;

c. A staff trauma surgeon or a staff surgeon with experience in trauma care shall be advised of all trauma patient admissions, participate in major therapeutic decisions, and be present in the emergency department for major resuscitations and in the operating room for all trauma operative procedures.

8.3 Available for consultation or consultation and transfer agreements for adult and pediatric trauma patients requiring the following surgical services:

a. Burns;

b. Cardiothoracic;

c. Pediatric;

d. Re-implantation/microsurgery; and

e. Spinal cord injury

9. Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows:

9.1 Emergency medicine, in-house and immediately available at all times. This requirement may be fulfilled by supervised senior residents, as defined in §100245 CCR, Chapter 7, in emergency medicine, who are assigned to the emergency department and are serving in the same capacity. In such cases, the senior resident(s) shall be capable of assessing emergency situations in trauma patients and of providing for initial resuscitation. Emergency medicine physicians who are qualified specialists in emergency medicine and are board certified in emergency medicine shall not be required by the local EMS agency to complete an advanced trauma life

support (ATLS) course. Current ATLS verification is required for all emergency medicine physicians who provide emergency trauma care and are qualified specialists in a specialty other than emergency medicine.

9.2 Anesthesiology. Level II shall be promptly available with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated treatment and are supervised by the staff anesthesiologist. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations.

9.3 Radiology, promptly available; and

9.4 Available for consultation:

a. Cardiology;

b. Gastroenterology;

c. Hematology;

d. Infectious diseases;

e. Internal medicine;

f. Nephrology;

g. Neurology;

h. Pathology; and

i. Pulmonary medicine

10. Radiological service. The radiological service shall have immediately available a radiological technician capable of performing plain film and computed tomography imaging. A radiological service shall have the following additional services promptly available:

10.1 Angiography; and

10.2 Ultrasound

11. Clinical laboratory service. A clinical laboratory service shall have:

11.1 A comprehensive blood bank or access to a community central blood bank;

11.2 Clinical laboratory services immediately available.

12. Surgical service. A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

12.1 Operating staff who are promptly available unless operating on trauma patients and back-up personnel who are promptly available; and

12.2 Appropriate surgical equipment and supplies as determined by the trauma program medical director.

13. A Level I or Level II trauma center shall have a basic or comprehensive emergency service which has special permits issued pursuant to Chapter 1, Division 5 of Title 22. The emergency service shall:

13.1 Designate an emergency physician to be a member of the trauma team;

13.2 Provide emergency medical services to adult and pediatric patients; and

13.3 Have appropriate adult and pediatric equipment and supplies as approved by the director of emergency medicine in collaboration with the trauma program medical director.

14. In addition to the special permit licensing services, a trauma center shall have, pursuant to Section 70301 of Chapter 1, Division 5 of Title 22 of the California Code of Regulations, the following approved supplemental services:

14.1 Intensive Care Service:

a. The ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;

b. The ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making; and

c. The qualified specialist in (b) above shall be a member of the trauma team.

14.2 Burn Center. This service may be provided through a written transfer agreement with a Burn Center.

14.3 Physical Therapy Service. Physical therapy services to include personnel trained in physical therapy and equipped for acute care of the critically injured patient.

14.4 Rehabilitation Center. Rehabilitation services to include personnel trained in rehabilitation care and equipped for acute care of the critically injured patient. These services may be provided through a written transfer agreement with a rehabilitation center.

14.5 Respiratory Care Service. Respiratory care services to include personnel trained in respiratory therapy and equipped for acute care of the critically injured patient.

14.6 Acute hemodialysis capability.

14.7 Occupational Therapy Service. Occupational therapy services to include personnel trained in occupational therapy and equipped for acute care of the critically injured patient.

14.8 Speech Therapy Service. Speech therapy services to include personnel trained in speech therapy and equipped for acute care of the critically injured patient.

14.9 Social Service.

15. A trauma center shall have the following services or programs that do not require a license or special permit:

15.1 Pediatric Service. In addition to the requirements in Division 5 of Title 22 of the California Code of Regulations, the pediatric service providing in-house pediatric trauma care shall have:

a. A pediatric intensive care unit approved by the California State Department of Health Services' California Children Services (CCS); or a written transfer agreement with an approved pediatric intensive care unit. Hospitals without pediatric intensive care units shall establish and utilize written criteria for consultation and transfer of pediatric patients needing intensive care; and

b. A multidisciplinary team to manage child abuse and neglect.

15.2 Acute spinal cord injury management capability. This service may be provided through a written transfer agreement with a Rehabilitation Center;

15.3 Protocol to identify potential organ donors as described in Division 7, Chapter 3.5 of the California Health and Safety Code;

15.4 An outreach program, to include:

a. Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and

b. Trauma prevention for the general public;

15.5 Written interfacility transfer agreements with referring and specialty hospitals;

15.6 Continuing education. Continuing education in trauma care shall be provided for:

a. Staff physicians;

b. Staff nurses;

c. Staff allied health personnel;

d. EMS personnel; and

e. Other community physicians and health care personnel.

16. CCR Chapter 7, §100265, Quality Improvement.

Trauma centers of all levels shall have a quality improvement process to include structure, process, and outcome evaluations which focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process. In addition, the process shall include:

16.1 A detailed audit of all trauma-related deaths, major complications and transfers (including interfacility transfer);

16.2 A multidisciplinary trauma peer review committee that includes all members of the trauma team;

16.3 Participation in the trauma system data management system;

16.4 Participation in the local EMS agency trauma evaluation committee; and

16.5 A written system in place for patients, parents of minor children who are patients, legal guardian(s) of children who are patients, and/or primary caretaker(s) of children who are patients to provide input and feedback to hospital staff regarding the care provided to the child.

16.6 Following of applicable provisions of Evidence Code Section 1157.7 to ensure confidentiality.

Appendix 2

Level III Trauma Center Standards

(§100259 CCR Chapter 7)

1. A trauma program medical director who is a qualified surgical specialist, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

    1.1 Recommending trauma team physician privileges;

    1.2 Working with nursing administration to support the nursing needs of trauma patients;

    1.3 Developing trauma treatment protocols;

    1.4 Having authority and accountability for the quality improvement peer review process;

    1.5 Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

    1.6 Assisting in the coordination of budgetary process for the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability, and responsibilities that include, but are not limited to:

    2.1 Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

    2.2 Coordinating day-to-day clinical process and performance improvement as pertains to nursing and ancillary personnel, and

    2.3 Collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements specified in this Section and provide for coordination with the local EMS agency.

4. The capability of providing prompt assessment, resuscitation and stabilization to trauma patients.

5. The ability to provide treatment or arrange for transportation to a higher-level trauma center as appropriate.

6. An emergency department, division, service, or section staffed so that trauma patients are assured of immediate and appropriate initial care.

7. Intensive Care Service:

   7.1 The ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;

   7.2 The ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making; and

   7.3 The qualified specialist in (2) above shall be a member of the trauma team.

8. A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

9. Qualified surgical specialist(s) who shall be promptly available:

   9.1 General;

   9.2 Orthopedic; and

   9.3 Neurosurgery (can be provided through a transfer agreement)

10. Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows:

   10.1 Emergency medicine, in-house and immediately available; and

   10.2 Anesthesiology, on-call and promptly available with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated emergent anesthesia treatment and are supervised by the staff anesthesiologist. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations.

   10.3 The following services shall be in-house or may be provided through a written transfer agreement:

      a. Burn care.

      b. Pediatric care.

      c. Rehabilitation services.

11. The following service capabilities:

   11.1 Radiological service. The radiological service shall have a radiological technician promptly available.

11.2 Clinical laboratory service. A clinical laboratory service shall have:

a. A comprehensive blood bank or access to a community central blood bank; and

b. Clinical laboratory services promptly available.

11.3 Surgical service. A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

a. Operating staff who are promptly available; and

b. Appropriate surgical equipment and supplies requirements which have been approved by the local EMS agency.

12. Written transfer agreements with Level I or II trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources.

13. An outreach program, to include:

13.1 Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and

13.2 Trauma prevention for the general public.

14. Continuing education. Continuing education in trauma care, shall be provided for:

14.1 Staff physicians;

14.2 Staff nurses;

14.3 Staff allied health personnel;

14.4 EMS personnel; and

14.5 Other community physicians and health care personnel.

Appendix 3

Level IV Trauma Center Standards

(§100264 CCR Chapter 7)

1. A trauma program medical director who is a qualified specialist whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care, including pediatric trauma care, such as:

    1.1 Recommending trauma team physician privileges;

    1.2 Working with nursing administration to support the nursing needs of trauma patients;

    1.3 Developing treatment protocols;

    1.4 Having authority and accountability for the quality improvement peer review process;

    1.5 Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

    1.6 Assisting in the coordination of the budgetary process for the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability; and responsibilities that include, but are not limited to:

    2.1 Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

    2.2 Coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel; and

    2.3 Collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements specified in this Section and provide for coordination with the local EMS agency.

4. The capability of providing prompt assessment, resuscitation and stabilization to trauma patients.

5. The ability to provide treatment or arrange transportation to higher level trauma center as appropriate.

6. An emergency department, division, service, or section staffed so that trauma patients are assured of immediate and appropriate initial care.

7. A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

8. The following service capabilities:

   8.1 Radiological service. The radiological service shall have a radiological technician promptly available.

   8.2 Clinical laboratory service. A clinical laboratory service shall have:

      a. A comprehensive blood bank or access to a community central blood bank; and

      b. Clinical laboratory services promptly available.

9. Written transfer agreements with Level I, II or III trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources.

10. An outreach program, to include:

   10.1 Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and

   10.2 Trauma prevention for the general public.

11. Continuing education. Continuing education in trauma care, shall be provided for:

   11.1 Staff physicians;

   11.2 Staff nurses;

   11.3 Staff allied health personnel;

   11.4 EMS personnel; and

   11.5 Other community physicians and health care personnel.