



Prehospital Care Policy Change Advisory

Notice: February 4, 2010

The EMS Agency is providing notification of three proposed EMS policy changes. The policy changes do not effect prehospital care operations. Policy 103 "Multi-Disciplinary Nature of Trauma" was revised to document additional continuing educational requirements for trauma center staff. Policy 403 "Trauma Center Services Areas" and Policy 605 "Prehospital Trauma Triage" were revised to reflect language changes made by the State of California related to pediatric trauma center designations. Those designation name changes do not change local pediatric patient destination directives.

The open comment period will close on <u>March 5, 2010</u>. Please forward your comments to John Blain at john.blain@hhs.sccgov.org.	
Policy 103 Multi-Disciplinary Nature of Trauma	<p><u>Section III(B)(1)(a); Added subsections which states:</u> "(6) Must have current Advanced Trauma Life Support (ATLS)" "(7) Attend on average 16 hours per year or 48 hours in years of verifiable external trauma related Continuing Medical Education (CME)"</p> <p><u>Section III(B)(1)(b); Added subsections which states:</u> "(5) Attend on average 16 hours per year of Continuing Medical Education (CME) or demonstration of participation in an internal educational process conducted by the trauma program"</p> <p><u>Section III(B)(2)(a); Revised subsection which states:</u> "(1) Be Board Certified by the American Board of Emergency Medicine or Osteopathic equivalent" "(2) Meet the same Continuing Medical Education requirements the Trauma Medical Director with the exception of ATLS (if Board Certified in Emergency Medicine)"</p> <p><u>Section III(B)(2)(b); Added subsections which states:</u> "(3) Attend on average 16 hours per year of Continuing Medical Education or demonstration of participation in an internal educational process conducted by the trauma program"</p>
Policy 403 Trauma Center Service Areas	<p><u>Section II(A); Revised subsection "4b" which states:</u> "Pediatric patients (under the age of 15) meeting Trauma Triage Criteria shall be transported to the closest Level 2 Pediatric Trauma Center (VMC & SUH) in Santa Clara County."</p>
Policy 605 Prehospital Trauma Triage	<p><u>Section II; Revised "third bullet" which states:</u> "Pediatric Major Trauma Victims under the age of 15 are to be transported to the closest Level 2 pediatric trauma center (Stanford or Valley Medical Center)."</p>

A copy of each document has been provided for your review and distribution to all prehospital care providers working for your agency. Additionally, this document and these policies will be posted to our Agency's website. If you have any questions, please contact John Blain at 408.792.1343 or by email at john.blain@hhs.sccgov.org.

Dedicated to the health of the whole community

The Public Health Department is a division of Santa Clara Valley Health & Hospital System, owned and operated by the County of Santa Clara.



Emergency Medical Services Agency Prehospital Care Manual **Policy 103**

MULTI-DISCIPLINARY NATURE OF TRAUMA

Effective Date [January 22, 2007 TBD](#)
Replaces [January 22, 2007](#) [July 1, 1995](#)

Resources
None

I. Purpose

To define the roles of the various participants in the multidisciplinary Santa Clara County Trauma System.

II. Prehospital Phase

A. Access to the Trauma System

1. The Trauma System may be accessed by the enhanced-911 capable Public Safety Answering Point (PSAP) in each city.
2. First response vehicles and ambulances shall be dispatched in accordance with Agency policy.

B. Prehospital Care

1. Local PSAPs may elect to participate in Emergency Medical Dispatch/Pre-Arrival Instructions, as approved by the EMS Medical Director.
2. All paramedics shall be accredited to practice in Santa Clara County and shall meet all trauma training requirements of the County and its Medical Director.
3. Prehospital trauma care shall be administered according to the Policies and Procedure promulgated by the Santa Clara County EMS Agency.

4. When multiple patients are injured at a single site, the Multiple Casualty Incident Plan may be activated according to Agency policy.
5. Trauma Center triage shall be according to approved policy

III. Trauma Centers

- A. Hospital Organization: Trauma centers shall have the following resources available:
 1. Trauma Service
 - a) Within the Department of Surgery
 - b) Directed by a surgeon certified by the American Board of Surgery.
 2. Emergency Department with special permit from the State of California to operate either as a Basic or a comprehensive Emergency Medical Service, Physician-on-duty, Department, and conform to the requirements of Title 22, California Administrative Code, Section 70411 et seq.
 3. Surgery Departments/Divisions/Staffs/Sections, each staffed by qualified specialists in
 - a) Cardiothoracic surgery,
 - b) General surgery,
 - c) Maxillofacial surgery,
 - d) Neurological surgery,
 - e) Obstetrics and gynecology surgery,
 - f) Ophthalmic surgery,
 - g) Oral surgery,
 - h) Otorhinolaryngologic and plastic surgery,
 - i) Pediatric surgery,
 - j) Urologic surgery, and

- k) Vascular surgery.
- 4. Non-surgical Departments/Divisions/Staffs/Sections, each staffed by qualified specialists, board certified in that specialty
 - a) Anesthesia,
 - b) Cardiology,
 - c) Gastroenterology,
 - d) Hematology,
 - e) Infectious disease (required only for level I designation),
 - f) Internal medicine,
 - g) Nephrology,
 - h) Pathology,
 - i) Pediatrics,
 - j) Pulmonary medicine, and
 - k) Radiology.

B. Personnel requirements

1. Trauma Service

- a) Director of Trauma shall:
 - (1) Coordinate in-hospital services and their relationship with the Emergency Department
 - (2) Be Board Certified in General Surgery
 - (3) Be a researcher in trauma care (required only at level I center)
 - (4) Meet the requirements of medical staff below

(5) Participate in the County Quality Improvement process and serve as a resource to the EMS Medical Director in EMS system trauma policy development.

(6) Must have current Advanced Trauma Life Support (ATLS)

(7) Attend on average 16 hours per year or 48 hours in three years of verifiable external trauma related Continuing Medical Education (CME)

b) Medical Staff shall:

(1) Be Board Certified in general surgery, or become Board Certified within three years of eligibility, or be a senior surgical resident (minimum PGY 4)

(2) Have successfully completed an American College of Surgeons/Advanced Trauma Life Support course

(3) Have current identifiable involvement in trauma care

(4) Special expertise in trauma care

(5) Attend on average 16 hours per year of Continuing Medical Education (CME) or demonstration of participation in an internal educational process conducted by the trauma program.

~~(5) Attend continuing medical education in trauma and related fields.~~

c) Trauma Nurse (or Program) Coordinator shall:

(1) Be responsible for the trauma center functions as related to nursing care of the trauma patients

(2) Be a Trauma Nurse Core Course (TNCC) provider

- (3) Be dedicated, full time to this role
- (4) Attend continuing education in trauma and related fields
- (5) Participate in the County Quality Improvement process and serve as a resource to the EMS Medical Director in EMS system trauma policy development.

d) Trauma Resuscitation Nurse shall:

- (1) Be a Trauma Nurse Core Course (TNCC) provider
- (2) Attend continuing education in trauma and related fields.

2. Emergency Department

a) Designated Medical Director shall:

- (1) Be Board Certified by the American Board of Emergency Medicine or Osteopathic equivalent
- (2) Meet the same Continuing Medical Education requirements of medical staff below as the Trauma Medical Director with the exception of ATLS (if Board Certified in Emergency Medicine).

b) Medical Staff shall:

- (1) Be Board Certified by the American Board of Emergency Medicine or become Board Certified within three years of eligibility
- (2) Have successfully completed an American College of Surgeons/Advanced Trauma Life Support course
- (3) Attend on average 16 hours per year of continuing medical education or demonstration of participation in an internal educational process conducted by the trauma program in trauma and related fields.

- c) Designated Clinical Supervisor or ED Head Nurse shall attend continuing education in trauma and related fields.
 - d) Staff Nurses shall:
 - (1) Be present in the Emergency Department 24 hours per day. (3 RN minimum)
 - (2) Attend continuing education in trauma and related fields.
 - (3) Complete an approved trauma orientation.
 - e) Nurses' Aides/Orderlies/ED Technicians shall be present in adequate numbers to support the medical and nursing staff.
3. Intensive Care Unit shall have:
- a) Designated Medical Director
 - b) Physician on-duty and available 24 hours per day
 - c) Designated Clinical Supervisor or Head Nurse with trauma nursing experience, and meet the requirements of staff nurses
 - d) Staff nurses
 - (1) In adequate number to maintain a nurse-patient ratio of 1:2 on each shift at all times.
 - (2) Attend continuing education in trauma and related fields.
 - e) Paraprofessional staff as required to support the services offered.
4. Postanesthesia Recovery Room (PAR)
- a) Physician supervision in-hospital 24 hours per day
 - b) Registered nurses and other essential personnel on-duty for the PAR 24 hours per day.
5. Other essential personnel

- a) Clinical laboratory and pulmonary laboratory technicians available in-hospital 24 hours per day.
- b) Certified Radiological Technician available in-hospital 24 hours per day.
- c) CT Scan Technician available in-hospital 24 hours per day.
- d) Pharmacist available in-hospital 24 hours per day.

C. Equipment and Facilities

- 1. Equipment for resuscitation and diagnosis and to provide advanced life support for the critically and seriously injured adult and pediatric patient shall include but not be limited to that required for a licensed general acute care hospital with a special permit for Basic Emergency Medical Services, Physician-on-duty, Department in accord with the California Administrative Code, Title 22, Section 70411 et seq.
- 2. Intensive Care Unit (ICU) - for trauma patients- shall
 - a) Have bed must be available within 3 hours of notification of need for use by a trauma patient
 - b) Meet any pertinent statutes and regulations
 - c) Have immediate access to clinical and pulmonary laboratory services
 - d) Have necessary equipment to provide intensive care, monitoring (including invasive monitoring) and resuscitation.
- 3. Operating Suite shall
 - a) Meet any pertinent statutes and regulations
 - b) Have an operating room staffed and available 24 hours per day
 - c) Have a second operating room staffed and available within 30 minutes should the first room be occupied by a trauma patient

- d) Have cardiopulmonary bypass pump-oxygenator and team on call back and promptly available.
4. Postanesthesia Recovery Room (PAR) shall have appropriate monitoring and resuscitation equipment
5. Clinical Laboratory Services
6. Radiological Special Capabilities shall be available 24 hours per day include:
 - a) Angiography,
 - b) Sonography,
 - c) Nuclear scanning,
 - d) Computerized tomography, and
 - e) Linear tomography.
7. Pharmacy
8. Acute Hemodialysis Capability in-hospital and immediately available 24 hours per day.
9. Organized Burn Care shall be provided in a Burn Unit, which meets any pertinent statutes and regulations, in-house or by agreement with another Burn Unit
10. Acute Spinal Cord Injury Management Capabilities shall be provided in a Spinal Cord Injury Unit which meets any pertinent statutes and regulations, in-house, or by agreement with another Spinal Cord Injury Unit
11. Rehabilitation Program
 - a) In-hospital consultation for immediate or acute rehabilitation.
 - b) Physical Medicine and Rehabilitation.
12. Human Support Services which meet all pertinent statutes and regulations.

- a) Occupational Medicine or an agreement with an outside facility to provide this service.
- b) Physical Medicine.
- c) Social Services.
- d) Nutrition Services.

IV. OTHER DESIGNATED RECEIVING FACILITIES

Other facilities in Santa Clara County may receive patients who do not meet the requirements of a Major Trauma Victim, but have non-trivial injuries. Some of these patients are delivered to the hospital through the 911 system, others by private vehicle. The 911 system will deliver patients only to hospitals which have an Emergency Department with a special permit from the State of California to operate either as a Basic or a comprehensive Emergency Medical Service, Physician-on-duty, Department, and conform to the requirements of Title 22, California Administrative Code, Section 70411 et seq.

Proposed Revision



Emergency Medical Services Agency Prehospital Care Manual **Policy 403**

TRAUMA CENTER SERVICE AREAS

Effective Date [January 22, 2007](#)TBD
Replaces ~~[June 22, 2005](#)~~ [January 22, 2007](#)

Resources
None

I. Purpose

- A. To define the service areas of designated Trauma Centers in Santa Clara County.
- B. To deliver Major Trauma Victims to a designated Trauma Center in an efficient manner that does not compromise patient care by overburdening any one center.

II. Trauma Center Service Areas

- A. All prospective Major Trauma Victims, in the 911 System, will be transported to the Trauma Center in accordance with the established Trauma Center Catchment Areas.
 - 1. The Stanford Catchment Zone extends from the Northern border of the County (on the West side of the Bay) extending to DeAnza Boulevard in the City of Cupertino (including Thomas Map 851 and west to the San Mateo County line), and through the center of the City of Sunnyvale.

The separation line in the City of Sunnyvale is Sunnyvale-Saratoga Road to East Remington/Fair Oaks Avenue to the bay. Incidents that occur on this line (or within a reasonable distance of the dividing line) shall be transported in accordance with the paramedics' discretion.

2. The VMC Catchment Zone extends from South of DeAnza Boulevard in the City of Cupertino and south of Sunnyvale-Saratoga Road to East Remington/Fair Oaks Avenue in Sunnyvale. The Eastern border is North First Street/Monterey Highway extending from San Jose (Alviso) to the Southern boundary at intersection of Highways 101 and 85 in San Jose.

Patients requiring transport from areas south the 101/85 Interchange and West of Highway 101 extending to the southern most borders of the County shall be transported to VMC.

Incidents that occur on these lines (or within a reasonable distances of the dividing lines) shall be transported in accordance with the paramedics' discretion.

3. The RSJ Catchment Zone extends from all areas East of North First Street/Monterey Highway (includes the City of Milpitas) to the Southern boundary at the intersection of Highways 101 and 85 in San Jose. The Northern border is the San Francisco Bay.

Patients requiring transport from areas south the 101/85 Interchange and East of Highway 101 extending to the southern most borders of the County shall be transported to RSJ.

Incidents that occur on these lines (or within a reasonable distances of the dividing lines) shall be transported in accordance with the paramedics' discretion.

45. EMS aircraft providers shall transport trauma patients to the -closest appropriate facility with a CALTRANS approved and -permitted helipad. The following exceptions apply to both -air and ground transportation:

- a. _____ Burn patients shall continue to be transported to the -Santa Clara Valley Medical Center, in accordance -with current Santa Clara County Prehospital Policy.
- b. _____ Pediatric patients (~~14 years old and~~ under the age of 15) meeting Trauma Triage Criteria shall be -transported to the closest Level +2 Pediatric Trauma -Center (VMC & SUH) in Santa Clara County.

| ~~(3)~~c. When a trauma service limitation is posted by the trauma center, patients are to be routed to the next closest appropriate facility.

- B. The primary service area for the trauma system is the geographic area under the jurisdiction of the Santa Clara County EMS System. Providers of health care outside of this system may transfer patients to one of the County Trauma Centers only after all federal, state and local transfer laws, as well as the requirements of the receiving facility, have been met.

Proposed Revision



Emergency Medical Services Agency Prehospital Care Manual **Policy 605**

PREHOSPITAL TRAUMA TRIAGE

Effective Date

~~January 22, 2008~~ TBD

Replaces

~~January 22, 2008~~ July 18, 1997

Resources

None

I. Purpose

To provide standard criteria for the triage of trauma patients in Santa Clara County.

II. Major Trauma Victim

Major Trauma Victims (MTV) are injured patients who meet the Mechanism of injury, Anatomic, or Physiologic triage criteria (MAP).

Adult Major Trauma Victims are to be transported expeditiously to the closest Trauma Center.

Pediatric Major Trauma Victims under the age of 15 are to be transported to the closest Level 2 pediatric trauma center ~~with a CCS approved Pediatric ICU~~ (Stanford or Valley Medical Center).

Pregnant Major Trauma Victims > 20 weeks gestation, are to be transported to the closest trauma center with an approved Level III Neonatal ICU (Stanford or Valley Medical Center)

Injured patients are to be identified as an MTV if one or more of the following criteria are met.

III. ADULT Major Trauma Victim – Physiologic Criteria

- A. Glasgow Coma Scale <14
- B. Systolic BP < 90
- C. Respiratory Rate < 10 or > 29/minute

IV. PEDIATRIC Major Trauma Victim (<15 y/o) – Physiologic criteria

- A. GCS <14
- B. Systolic BP <60 for child 6 years old or younger
- C. Systolic BP <90 for child older than 6 years
- D. Respiratory Rate <10 or >29
- E. Respiratory Rate < 20 in infant less than one year

V. Major Trauma Victim – Anatomic Criteria

- A. Penetrating injuries to head, neck, chest, back, abdomen, groin, or extremities proximal to the elbow or knee.
- B. Two (2) or more proximal long bone fractures.
- C. Traumatic paralysis or paresthesia.
- D. Flail or crushed chest.
- E. Amputations proximal to the wrist or ankle.
- F. Suspected pelvic fractures. (See Section VII Special Considerations)
- G. CNS changes witnessed by prehospital personnel that include the following:
 - post traumatic seizure
 - transitory or prolonged LOC
 - hemiparesis

- H. Crushed, degloved or mangled extremity
- I. Open or depressed skull fracture

VI. Major Trauma Victim – Mechanism of Injury Criteria

- A. High-Risk Auto Crash as evidenced by:
 - Estimated impact speed > 40 mph
 - Major auto deformity > 12 inches occupant site or > 18 inches any other site.
 - Significant structural damage to the vehicle caused by contact with patient's body, such as damage to the steering wheel and/or column, windshield, etc.
 - Ejection (partial or complete) from the vehicle.
 - Death of a passenger in the same vehicle, who suffered the same or similar mechanism.
 - Prolonged extrication is required to free the victim.
 - Rollover with unrestrained occupant
- B. Falls
 - Adults: > 15 feet (one story is equal to 10 feet)
 - Pediatric: >10 feet or twice the height of a child that is < 6 years old.
- C. Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact
- D. Motorcycle crash > 20 mph
- E. Cycle ** crash with rider thrown a significant distance to sustain probable injury.

**The term "cycle" may include motorcycle, bicycle, ATV, etc.

VII. Special Considerations

A. There are other factors that might lower the threshold at which patients should be treated in Trauma Centers. The following should be considered in prehospital trauma triage:

1. Age:

- Patients over age fifty-five (55) have an increased risk of death from even moderately severe injuries.

Pediatric Considerations:

- Trauma triage of the pediatric patient requires that the practitioner be knowledgeable of the uniqueness of children's anatomy and their physiologic needs. Interventions must be varied to meet the subtle anatomic and physiologic differences between children and adults. Children sustain more head and multi-systems injuries than adults due to the fact that traumatic force applied to a child's body is distributed over less body mass.

2. Co-morbid Factors: The presence of cardiac, respiratory or metabolic disease are also factors that may merit the triage of patients with moderately severe injury to Trauma Centers.

3. Alcohol, drug influence and/or foreign language speaking patients are examples of factors that may make an accurate neurological assessment difficult. The paramedic should maintain a higher index of suspicion in these cases.

4. Patients on anti-coagulants or with bleeding disorders.

5. Patients with end stage renal disease requiring dialysis.

6. Time sensitive extremity injury.

7. EMS provider judgment to transport patient to a trauma center.

8. Burns:

- Without other trauma mechanism: Triage to burn facility (Valley Medical Center).
- With trauma mechanism: Triage to closest appropriate trauma center.

VIII. Major Trauma Victim – Ambulance Transport

- A. Transport all Major Trauma Victims to a designated Trauma Center.
- B. If a Major Trauma Victim refuses transport to a Trauma Center, Base Hospital contact must be made for Base Hospital Physician consultation.
- C. Patients who are not deemed a Major Trauma Victim according to the criteria established herein should be transported to an appropriate acute care hospital with emergency services.

IX. Triage Decisions

- A. Base Hospital contact should be made whenever there are questions or problems regarding triage or transport to a designated Trauma Center.
- B. If the patient meets trauma triage criteria as described herein, but the paramedic believes that transport to the Trauma Center is not indicated, Base Hospital contact is required for transport to a non-trauma center.

Proposed Revision