CENTRAL CALIFORNIA
EMERGENCY MEDICAL SERVICES
A Division of the Fresno County Department of Public Health

Manual Emergency Medical Services Administrative Policies and Procedures	Policy Number 530.23
Subject Paramedic Treatment Protocols **TRAUMA**	Page 1 of 3
References Title 22, Division 9, Chapter 4 of the California Code of Regulations	Effective Fresno County: 01/15/82 Kings County: 04/10/89 Madera County: 06/15/85 Tulare County: 04/19/05

STANDING ORDERS	
1. Assessment	ABCs
2. Secure Airway	Protect with position, basic airway maneuvers, pharyngeal airway, advanced airway enroute if indicated, assist respirations as needed, suction as needed.
3. Control Bleeding	Direct pressure. Apply tourniquet per EMS Policy #510.23 for life threatening extremity bleeding not controlled with direct pressure.
4. Spine Immobilization	As per protocol – EMS Policy #530.02.
5. Pain Management	Fentanyl 25-100 mcg IV/IM/IN push every 5 minutes until pain is relieved or a change in level of consciousness. Recheck BP before each dose. Maximum total dose of 100 mcg. Pediatric dose: Fentanyl 1mcg/kg/dose IV/IM/IN push. Repeat once after 5 minutes, if needed.
6. Transport	Minimize on scene time to less than 10 minutes.
7. Oxygen	If indicated. Low flow. High flow if unstable or suspected traumatic brain injury. Refer to EMS Policy #530.02.
8. Complete Assessment	Complete vital signs on all trauma patients. Secondary assessment enroute as time permits.

STANDING ORDERS – CONTINUED ON NEXT PAGE

Approved By EMS Division Manager	Revision **DRAFT**
  EMS Medical Director	

STANDING ORDERS	
9. IV Access (Two 14 or 16 gauge)	If indicated. Saline Lock or Lactated Ringers with standard tubing. Fluids are to be administered to keep systolic blood pressure greater than 90. Pediatrics – LR 20cc/kg if BP is less than 80 with signs/symptoms of shock. (Refer to EMS Policy #530.32, for estimated weight formulas or use Broselow tape.) NOTE: May establish IV earlier for pain management if patient is non-stat.
10. Tranexamic Acid	2g diluted in 100 ml NS IV infusion over 10 minutes if all the following criteria are met: - Systolic BP < 90 mmHg - Significant blunt or penetrating trauma - <3 hours from the time of injury - Age > 14 years Do not delay transport for administration of TXA. Infusion bag must be labelled with approved sticker and handed off to receiving RN/MD along with verbal report that TXA was administered.
11. Avoid hypothermia	Apply blanket and heat ambulance as needed.
12. Cardiac Monitor	If indicated. Treat rhythm if appropriate.
12. Contact Hospital	Per EMS Policy #530.02.

BASE HOSPITAL ORDERS	
*1. Needle Thoracostomy	If all of the following are present - Severe respiratory distress (apnea, severe dyspnea, SpO2 <90%, difficulty bagging) - Lateralizing exam (decreased breath sounds on one side, tracheal deviation) - SBP <90 mmHg Refer to EMS Policy #530.02.

SPECIAL CONSIDERATION AND PRIORITIES

1. On-scene time must be less than 10 minutes unless multiple patients or prolonged extrication complicated the incident. (Document on Prehospital Care Report any delays at scene.)

2. Unstable or STAT patients require immediate transport with ALS treatment enroute. On-scene treatment should be limited to BLS airway management, covering an open chest wound, pressure to major bleeding, and spine immobilization.

3. For patients who require immediate transport, once loaded and enroute, assess blood pressure. Enroute initiate advanced airway therapy, IVs, and oxygen. Contact Base as soon as possible with ETA.

4. Transport lights/siren all patients in shock or unstable.

5. Bandage injuries enroute as time allows. Cover any open chest or airway wounds with a three-sided dressing or commercially available vented chest seal.

Subject	Policy
Paramedic Treatment Protocols – Trauma	Number 530.23

6. Traumatic brain injury considerations:

   Repeated neuro exams are essential (emphasize mental status, pupils, respiratory pattern, motor response). Deteriorating neuro status is an emergency.

   Provide high flow O2 for all suspected TBI.

   Vomiting can increase intracranial pressure and lead to airway compromise. Treat nausea/vomiting with Ondansetron as needed per EMS Policy #530.41

7. Amputation Considerations: Wrap extremity in dry sterile gauze, place in plastic bag, and bring to hospital on ice if possible.

8. Evisceration considerations: Apply moist sterile dressing to eviscerations.

9. Hanging Considerations: The majority of EMS calls dealing with "hanging" are predominately asphyxiation/strangulation cases. This means patients with a mechanism of injury of a hanging need spinal immobilization and trauma consideration, but should be treated as a medical cardiac arrest if found pulseless and non-breathing.

10. Aggressive IV fluid resuscitation increases vascular pressure and dilutes clotting factors. IV fluids should be administered only to maintain SBP > 90 mmHg.

11. Use MIVT format when reporting to trauma staff or transfer to another unit or helicopter:

    "M" Mechanism
    "I" Injuries
    "V" Vital Signs
    "T" Treatment