CENTRAL CALIFORNIA
EMERGENCY MEDICAL SERVICES

A Division of the Fresno County Department of Public Health

Manual	Policy
Emergency Medical Services Administrative Policies and Procedures	Number 530.23
Subject: Paramedic Treatment Protocols **TRAUMA**	
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. Control Bleeding	Immediately control life threatening hemorrhage. Apply direct pressure, wound packing, or tourniquet as needed per EMS Policy #510.23.
2. Secure Airway	Protect with position, basic airway maneuvers, pharyngeal airway, advanced airway enroute if indicated, assist respirations as needed, suction as needed.
3. Spine Immobilization	As per protocol – EMS Policy #530.02.
4. Transport	Minimize on scene time to less than 10 minutes.
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. Oxygen	If indicated. Low flow. High flow if unstable or suspected traumatic brain injury. Refer to EMS Policy #530.02.
7. IV Access (Two 18 gauge or larger)	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.

STANDING ORDERS – CONTINUED ON NEXT PAGE

Approved By		Revision
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EMS Medical Director	**Miranda Lewis, M.D.** (Signature on File at EMS Agency)	

Subject Paramedic Treatment Protocols – Trauma	Policy Number 530.23

STANDING ORDERS	
8. Tranexamic Acid	2g diluted in 100 ml NS IV/IO infusion over 10 minutes if all the following criteria are met: - Systolic BP < 90 mmHg - Significant blunt or penetrating trauma with uncontrolled hemorrhage - <3 hours from the time of injury - Age > 14 years Do not delay transport for administration of TXA. Infusion bag must be labeled with medication name/dose and handed off to receiving RN/MD along with verbal report that TXA was administered.
9. Avoid hypothermia	Apply blanket and heat ambulance as needed.
10. Cardiac Monitor	If indicated. Treat rhythm if appropriate.
11. Contact Hospital	Per EMS Policy #530.02.

BASE HOSPITAL ORDERS	
*1. Needle Thoracostomy	If all the following are present: - Severe respiratory distress (apnea, severe dyspnea, SpO_2 <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. Contact Base as soon as possible with ETA.

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

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

5. TXA Contraindications:
   - Age ≤ 14
   - >3 hours post injury
   - Traumatic arrest without ROSC
   - Known allergy to TXA
   - Hemorrhagic shock stabilized by other hemostatic interventions
   - Non-hemorrhagic shock

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

7. 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 O_2 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.

8. Amputation Considerations: Wrap extremity in dry sterile gauze, place in plastic bag, and bring to hospital on ice if possible. Bleeding control with tourniquet ~2 inches proximal to amputation site, if indicated.

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

10. Hanging Considerations: The majority of EMS calls dealing with "hanging" are predominantly 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.

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