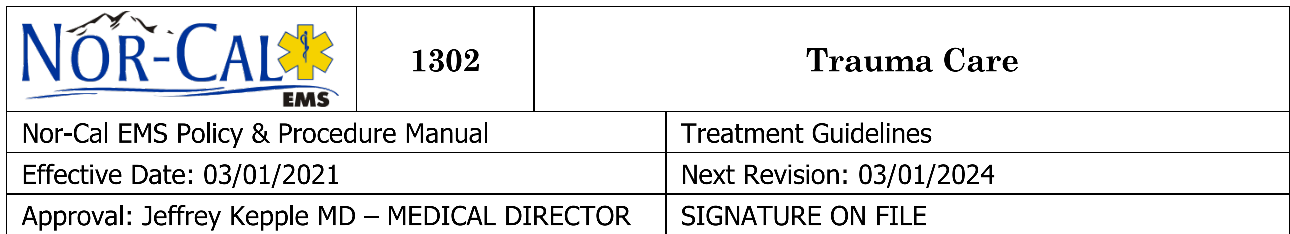

1302	Trauma Care
Nor-Cal EMS Policy & Procedure Manual	Treatment Guidelines
Effective Date: 03/01/2021	Next Revision: 03/01/2024
Approval: Jeffrey Kepple MD – MEDICAL DIRECTOR	SIGNATURE ON FILE

Authority: Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9.

See Trauma Decision Scheme
Assess ABC's & Hemorrhage control if necessary
History and Physical exam (LS-Consider Tension Pneumothorax)
Vital Signs
Oxygen: Titrate to SPo2 to 94%
Airway control as appropriate
Initiate Spinal Motion Restriction as appropriate
Keep patient warm

Life threatening blood

Yes:

To Extremity:
Apply commercial tourniquet proximal to bleeding
If bleeding continues consider placing a second tourniquet

To areas not amenable to tourniquet:
Consider Hemostatic dressing use
Pack wound and apply direct pressure

No:

Package for rapid transport and transport ASAP
ideally less than 10 minutes

Ensure trauma notifications as appropriate continue to evaluate for signs of instability

ALS

Establish IV / IO
ECG

Patient systolic BP less than 90
Consider TXA

Titrate warmed fluid bolus
To keep systolic BP above 90

If patient systolic bp greater than 90
Consider Pain management protocol

Trauma notes:

- Use pain management protocol as appropriate
- Stabilize impaled objects in place
- Warming measures to be used regularly
- Refer to SMR protocol as needed
- Consider Anxiety/Behavioral protocol as needed

Traumatic arrest care:

- See **Determination of Death protocol**
- Asystole or PEA less than 40 terminate efforts
- Consider bilateral needle thoracostomies if chest trauma or suspected tension pneumothorax
- Otherwise treat with **Pulseless Arrest protocol**

TXA:
Mix 1 gram into a 100ml bag of NS or D5 give over 10 minutes

Indications:
(Greater than 15 years of age **AND** within 3 hours of the injury)
Blunt or penetrating traumatic injury with signs/symptoms of hemorrhagic shock: including SBP of less than 90 (100 in patients older than 65) OR pulse greater than 120.

Contraindications:
Less than 15 years of age, greater than 3 hours from injury, suspected spinal shock or isolated head injury

Pelvic Binder use:
Consider if high energy trauma suspicious for pelvic fracture
and any one (1) of the following:

- Noted crepitus to iliac crest
- Genital/perineal edema
- Groin pain
- Rectal, Vaginal perineal bleeding
- GCS less than 13
- Hemodynamically unstable

Amputation Care:

- Remove gross contamination
- Wrap in dry sterile dressing
- Place in plastic bag on ice/ cold packs
- Transport amputated part with the patient
- Consider Air medical services
- DO NOT soak in saline or place directly on ice

Crush injury care:
Generally greater than 4 hours of entrapment (Can be 1 hour in severe crush situation)

Before release of the crush mechanism:

- Establish an IV/IO x2 and give a 30ml/kg bolus

Treatment

- Treat pain via pain management protocol
- Maintain systolic BP greater than 90 mmhg (Push Dose Epi as necessary)

Consider EARLY Base hospital contact for any sign hyperkalemia (peaked T or Wide QRS):

- Albuterol 5mg (nebulized) repeat until arrive at hospital
- Calcium 1 gram
- Sodium Bicarbonate 1 mEq/kg (Separate line from other medications / or flush well)

Suspected Tension Pneumothorax Care: Perform Needle Thoracostomy
Absent or diminished lung sounds with any of the following:

- Hypotension
- Spo2 less than 94%
- Penetrating injury to the thorax
- Traumatic cardiac arrest

Approved sites:
Mid Clavicular line in the 2nd intercostal space
Mid Axillary line in the 4th or 5th intercostal space