TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

Approved by EMS Medical Director 2024

BITES AND ENVENOMATIONS TRAUMA PROTOCOL # 5 - 01

HISTORY
- ✓ Type of bite/sting
- ✓ Description of creature or photograph for identification
- ✓ Time, location, size of bite/sting
- ✓ Previous reaction to bite/sting
- ✓ Domestic v. wild
- ✓ Tetanus and Rabies risk
- ✓ Immunocompromised patient

SIGNS AND SYMPTOMS
- ✓ Rash, skin break, wound
- ✓ Pain, soft tissue swelling, redness
- ✓ Blood oozing from the bite wound
- ✓ Evidence of infection
- ✓ Shortness of breath, wheezing
- ✓ Allergic reaction, hives, itching
- ✓ Hypotension or shock

DIFFERENTIAL
- ✓ Animal bite
- ✓ Human bite
- ✓ Snake bite (poisonous)
- ✓ Spider bite (poisonous)
- ✓ Insect sting/bite (bee, wasp, ant, tick)
- ✓ Infection risk
- ✓ Rabies risk
- ✓ Tetanus risk

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

Universal Patient Care Protocol

↓

R — Position patient supine
Immobilize area or limb
Apply ice/cold pack if appropriate — R

↓

Animal Bite: Document County of Occurrence and Contact with Law Enforcement or Animal Control

↓

Refer to appropriate protocols if necessary:
Pain Control
Allergic Reaction

↓

M — **Contact Medical Control and Notify Destination** — M

PEARLS
- ✓ Human bites have a higher infection rate than animal bites due to normal mouth bacteria
- ✓ Carnivore bites are much more likely to become infected and all have risk of Rabies exposure
- ✓ Cat bites may progress to infection rapidly due to specific bacteria (Pasteurella multicoda)
- ✓ Poisonous snakes in the area are rare, but are of the pit viper family: Timber rattlesnakes and water moccasins. If no pain or swelling, envenomation is unlikely
- ✓ Brown Recluse spider bites are minimally painful to painless. Little reaction is noted initially, but tissue necrosis at the site of the bite develops over the next few days (brown spider with fiddle shape on back)
- ✓ Evidence of infection: swelling, redness, drainage, fever, red streaks proximal to wound
- ✓ Immunocompromised patients are at increased risk for infection: diabetes, chemotherapy, transplant patients
- ✓ Consider contacting the Illinois Poison Control Center for guidance: **1 800 222 1222**

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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BURNS: CHEMICAL & ELECTRICAL TRAUMA PROTOCOL # 5 - 02

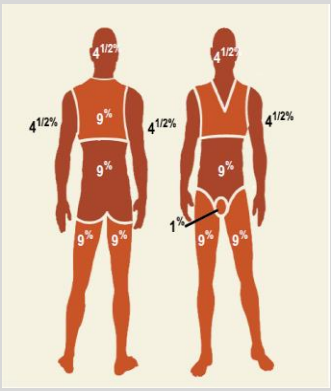
HISTORY
- ✓ Type of exposure (heat, gas, chemical)
- ✓ Inhalation injury
- ✓ Past medical history and medications
- ✓ Other trauma
- ✓ Loss of consciousness
- ✓ Tetanus/Immunization status

SIGNS AND SYMPTOMS
- ✓ Burns, pain, swelling
- ✓ Dizziness
- ✓ Loss of consciousness
- ✓ Hypotension, shock
- ✓ Airway compromise/distress
- ✓ Singed facial hair or nasal hair
- ✓ Hoarseness/wheezing

DIFFERENTIAL
- ✓ Superficial (1st Degree) – red and painful
- ✓ Partial Thickness (2nd Degree) – blistering
- ✓ Full Thickness (3rd Degree) – painless/charred or leathery skin
- ✓ Thermal
- ✓ Chemical
- ✓ Electrical
- ✓ Radiation

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

Rule of 9's



Universal Patient Care Protocol

P — **Cardiac Monitor** — P

Eye involvement? Continuous saline flush in affected eye.
Flush with water or **Normal Saline** for 10-15 minutes
Remove rings, bracelets, and other constricting items.
Remove clothing or exposed area.
Identify entry and exit sites. Apply sterile dressings.

A — **Pain Control Protocol** IV meds only for Burn Patients — A

A — **IV Access Protocol Normal Saline Bolus using the Parkland Formula** — A

Chemical and Electrical Burn patients must be triaged using the guidelines below and their care must conclude in the **Thermal Burn Protocol**

CRITICAL (RED)
- >15% TBSA 2nd/3rd Degree Burn
- Burns with multiple trauma
- Burns with definitive airway compromise

SERIOUS (YELLOW)
- 5-15% TBSA 2nd/3rd Degree Burn
- Suspected inhalation injury or requiring intubation for airway stabilization
- Hypotension or GCS<14

MINOR (GREEN)
- <5% TBSA 2nd/3rd Degree Burn
- No inhalation injury
- Not intubated
- Normotensive
- GCS>14

PEARLS – CHEMICAL
- ✓ Refer to Decontamination Standard Procedure
- ✓ Certainly 0.9% NaCl or Sterile Water is preferred; however, if it is not readily available, do not delay, use tap water for flushing the affected area or other immediate water sources. Flush the area as soon as possible with the cleanest readily available water or saline solution using copious amounts of fluids

PEARLS – ELECTRICAL
- ✓ Do not contact the patient until you are certain the source of electric shock has been disconnected.
- ✓ Attempt to locate contact points (entry wound where the AC source contacted the patient, an exit at the ground point) both sites will generally be full thickness.
- ✓ Cardiac monitor, anticipate ventricular or atrial irregularity, to include V-tach, V-fib, heart blocks, etc.
- ✓ Attempt to identify the nature of the electrical source (AC v. DC), the amount of voltage, and the amperage the patient may have been exposed to during the electrical shock.

TRAUMA PROTOCOL # 5 - 02

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

Approved by EMS Medical Director 2024

BURNS: THERMAL TRAUMA PROTOCOL # 5 - 03

HISTORY
- ✓ Type of exposure (heat, gas, chemical)
- ✓ Inhalation injury
- ✓ Time of injury
- ✓ Past medical history
- ✓ Medications
- ✓ Other trauma
- ✓ Loss of consciousness
- ✓ Tetanus/Immunization status

SIGNS AND SYMPTOMS
- ✓ Burns, pain, swelling
- ✓ Dizziness
- ✓ Loss of consciousness
- ✓ Hypotension/shock
- ✓ Airway compromise/distress
- ✓ Singed facial hair or nasal hair
- ✓ Hoarseness/wheezing

DIFFERENTIAL
- ✓ Superficial (1st Degree) – red and painful
- ✓ Partial Thickness (2nd Degree) – blistering
- ✓ Full Thickness (3rd Degree) – painless/charred or leathery skin
- ✓ Thermal
- ✓ Chemical
- ✓ Electrical
- ✓ Radiation

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

Universal Patient Care Protocol

CRITICAL (RED)

>15% TBSA 2nd/3rd Degree Burn
Burns with multiple trauma
Burns with definitive airway compromise

SERIOUS (YELLOW)

5-15% TBSA 2nd/3rd Degree Burn
Suspected inhalation injury or requiring intubation for airway stabilization
Hypotension or GCS<14

MINOR (GREEN)

<5% TBSA 2nd/3rd Degree Burn
No inhalation injury
Not intubated
Normotensive
GCS>14

Remove rings, bracelets, and other constricting items

Airway Protocol (Adult or Peds)

Cover burn with dry, sterile sheet or dressings

A — **Normal Saline** 2 large bore IVs Infuse total of 0.25 x kg body weight x %TBSA per hour for first 8 hours — A

Cool down the wound with Normal Saline

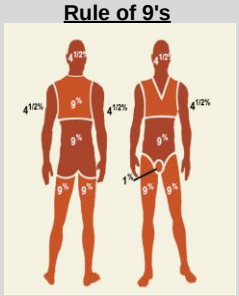
Cover burn with dry, sterile sheet or dressings

A — **Normal Saline** Infuse total of 0.25 x kg body weight x %TBSA per hour for first 8 hours — A

Pain Control Protocol (Adult or Peds)

M — **Contact Medical Control and Notify Destination** — M

Rule of 9's



CRITICAL OR SERIOUS BURNS
- ✓ > 5 – 15% TBSA; 2nd or 3rd degree burns, or
- ✓ 3rd degree burns > 5% TBSA for any age group, or
- ✓ Circumferential burns of extremities or
- ✓ Suspicion of abuse or neglect, or
- ✓ Inhalation injury, or
- ✓ Chemical burns, or
- ✓ Burns of face, hands, perineum, or feet, or
- ✓ Any burn requiring hospitalization

PEARLS
- ✓ Burn patients are trauma patients! Evaluate for multisystem trauma
- ✓ Assure whatever has caused the burn is no longer contacting the injury (STOP THE BURNING PROCESS)
- ✓ Early intubation is required when the patient experiences significant inhalation injuries
- ✓ Potential CO exposure should be treated with 100% oxygen
- ✓ Circumferential burns to extremities are dangerous due to potential vascular compromise secondary to soft tissue swelling
- ✓ Burn patients are prone to hypothermia – never apply ice or cool burns; must maintain normal body temperature
- ✓ Evaluate the possibility of child abuse with children and burn injuries

TRAUMA PROTOCOL # 5 - 03

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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CRUSH SYNDROME
TRAUMA PROTOCOL # 5 - 04

HISTORY
- ✓ Agricultural injury
- ✓ Industrial accident
- ✓ Construction

SIGNS AND SYMPTOMS
- ✓ Hypothermia
- ✓ Pain, swelling
- ✓ Altered sensation/motor function
- ✓ Diminished pulses/capillary refill

DIFFERENTIAL
- ✓ Abrasion/Contusion
- ✓ Laceration
- ✓ Sprain
- ✓ Dislocation/Fracture
- ✓ Compartment Syndrome

Universal Patient Care Protocol

Consider the 5 Ps:
Pain
Pallor
Paresthesia
Poikilothermia
Pulselessness

Treat for **Hypothermia** if indicated

Apply tourniquets to affected extremity/ extremities prophylactically if appropriate

ALS **MUST** BE CALLED FOR CRUSH INJURY. IF POSSIBLE, ALS **SHOULD** BE PRESENT BEFORE RELEASE OF CRUSH INJURY

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

CONTACT MEDICAL CONTROL UPON ARRIVAL TO SCENE

R — Ensure airway **Oxygen** 15L NRB — R

R — **Vital Signs** — R

T — **Albuterol 2.5 mg Nebulized x1** — T

A — **Normal Saline Bolus 1 L** — A → **Maintain systolic BP > 100**

P — **Sodium Bicarbonate** 50 mEq in 1L NS Administer entire 1L **Normal Saline** — P

T — **12 Lead EKG** if available — T

EKG Changes

P — **Calcium Chloride** 1 gram IV with 20 ml flush — P → M — **RAPID TRANSPORT AND CONTACT MEDICAL CONTROL** — M

No EKG Changes → **RAPID TRANSPORT AND CONTACT MEDICAL CONTROL**

PEARLS
- ✓ EKG changes of hyperkalemia include peaked T waves, loss of P waves, wide QRS
- ✓ Crush injuries lead to rapid release of potassium from cells. Overload of potassium leads to cardiac dysrhythmias
- ✓ Patients who have been trapped can appear hemodynamically stable until released. After release, patient can become unstable very quickly. Do not delay life saving measures for ALS if immediate threat to life exists
- ✓ ALS should be on scene prior to release of any crush injury
- ✓ Monitor lung sounds, patient is at risk for pulmonary edema

TRAUMA PROTOCOL # 5 - 04

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

Approved by EMS Medical Director 2021

DROWNING
TRAUMA PROTOCOL # 5 - 05

HISTORY
- ✓ Submersion in water regardless of depth
- ✓ Possible trauma to cervical spine
- ✓ Possible history of trauma, e.g., diving board
- ✓ Duration of immersion
- ✓ Temperature of water or possibility of hypothermia

SIGNS AND SYMPTOMS
- ✓ Unresponsive
- ✓ Mental status changes
- ✓ Decreased or absent vital signs
- ✓ Vomiting
- ✓ Coughing
- ✓ Apnea
- ✓ Stridor
- ✓ Wheezing
- ✓ Rales

DIFFERENTIAL
- ✓ Trauma
- ✓ Pre-existing medical problem
- ✓ Pressure injury (diving)
  - Barotrauma
  - Decompression sickness
- ✓ Post-immersion syndrome

TRAUMA PROTOCOL # 5 - 05

Universal Patient Care Protocol

↓

Spinal Immobilization Procedure

R	**Pulse Oximetry**	R
T	**12 Lead EKG** if available	T
A	**Cardiac Monitor**	A
A	**IV Access Protocol**	A
R	Consider **Albuterol 2.5 mg Nebulized** for wheezing	R
T	Consider **CPAP** for respiratory distress	T

↓

Monitor and reassess

↓

Appropriate Protocol
Based on symptoms

↓

M	**Contact Medical Control and Notify Destination**	M

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

PEARLS
- ✓ Have a high index of suspicion for possible spinal injuries
- ✓ There is no time limit on cold water drownings. Resuscitate all cold water drownings. Patients have increased chance of survival
- ✓ Some patients may develop delayed respiratory distress
- ✓ All victims should be transported for evaluation due to potential for worsening over the next several hours
- ✓ Drowning is a leading cause of death among would-be rescuers
- ✓ All appropriately trained and certified rescuers to remove victims from areas of danger

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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EXTREMITY TRAUMA
TRAUMA PROTOCOL # 5 - 06

HISTORY
- ✓ Type of injury
- ✓ Mechanism: crush/penetrating/ amputation
- ✓ Time of injury
- ✓ Open vs. closed wound/fracture
- ✓ Wound contamination
- ✓ Medical history
- ✓ Medications

SIGNS AND SYMPTOMS
- ✓ Pain, swelling
- ✓ Deformity
- ✓ Altered sensation/motor function
- ✓ Diminished pulse/capillary refill
- ✓ Decreased extremity temperature

DIFFERENTIAL
- ✓ Abrasion
- ✓ Contusion
- ✓ Laceration
- ✓ Sprain
- ✓ Dislocation
- ✓ Fracture
- ✓ Amputation

Universal Patient Care Protocol

R	**Wound care** **Control hemorrhage** with pressure **Splinting** as required	R
R	If hemorrhage cannot be controlled by direct pressure and is life-threatening, consider **Tourniquet Procedure**	R
A	**IV Access Protocol**	A
	Pain Control Protocol (Adults or Peds)	
R	If amputation is clean, wrap amputated part in sterile dressing soaked in normal saline and place in air tight container. Place container on ice if available.	R
M	**Contact Medical Control and Notify Destination**	M

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

PEARLS
- ✓ Peripheral neurovascular status is important
- ✓ In amputations, time is critical. Transport and notify medical control immediately, so that the appropriate destination can be determined
- ✓ Dislocations/fractures of hip, knee, or elbow have high incidence of vascular compromise
- ✓ Urgently transport any injury with vascular compromise
- ✓ Blood loss may be concealed or not apparent with extremity trauma
- ✓ *Lacerations must be evaluated for repair within 6 hours of injury*

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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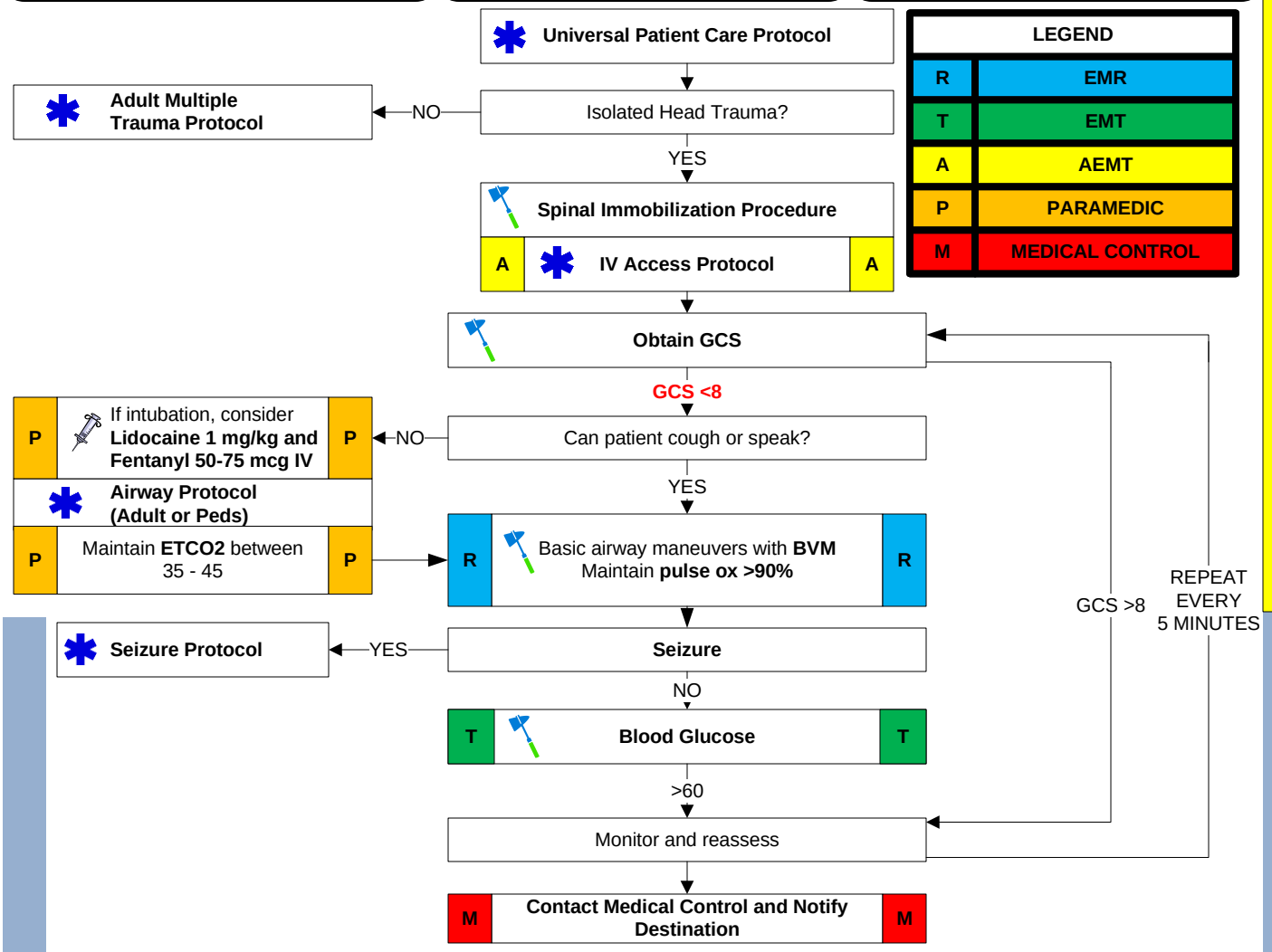
HEAD TRAUMA
TRAUMA PROTOCOL # 5 - 07

HISTORY
- ✓ Time of injury
- ✓ Mechanism (blunt v. penetrating)
- ✓ Loss of consciousness
- ✓ Bleeding
- ✓ Past medical history
- ✓ Medications
- ✓ Evidence for multi-trauma

SIGNS AND SYMPTOMS
- ✓ Pain, swelling, bleeding
- ✓ Altered mental status
- ✓ Unconsciousness
- ✓ Respiratory distress/failure
- ✓ Vomiting
- ✓ Major traumatic mechanism of injury
- ✓ Seizure

DIFFERENTIAL
- ✓ Skull fracture
- ✓ Brain injury (concussion, contusion, hemorrhage, or laceration)
- ✓ Epidural hematoma
- ✓ Subdural hematoma
- ✓ Subarachnoid bleed
- ✓ Spinal injury
- ✓ Abuse



PEARLS
- ✓ If GCS <12 consider air/rapid transport
- ✓ In the absence of capnography, hyperventilate the patient (adult: 20 breaths/minute; child: 30; infant: 35) ONLY if ongoing evidence of brain herniation (blown pupil, decorticate or decerebrate posturing, or bradycardia)
- ✓ Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushing's Response)
- ✓ Hypotension usually indicates injury or shock unrelated to the head injury and should be aggressively treated
- ✓ The most important item to monitor and document is a change in the level of consciousness
- ✓ Consider restraints if necessary for patient's and/or personnel's protection per the Restraint Procedure
- ✓ Limit IV fluids unless patient is hypotensive
- ✓ Concussions are periods of confusion or LOC associated with trauma which may have resolved by the time EMS arrives. Any prolonged confusion or mental status abnormality which does not return to normal within 15 minutes or any documented loss of consciousness should be evaluated by a physician ASAP
- ✓ In areas with short transport times, RSI/Drug-Assisted Intubation is not recommended for patients who are spontaneously breathing and who have oxygen saturations >90% with supplemental oxygen

TRAUMA PROTOCOL # 5 - 07

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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HYPERTHERMIA
TRAUMA PROTOCOL # 5 - 08

HISTORY
- ✓ Age
- ✓ Exposure to increased temperatures and / or humidity
- ✓ Past medical history
- ✓ Medications
- ✓ Extreme exertion
- ✓ Time and length of exposure
- ✓ Poor PO intake
- ✓ Fatigue/muscle cramping

SIGNS AND SYMPTOMS
- ✓ Altered mental status or unconsciousness
- ✓ Hot, dry, or sweaty skin
- ✓ Hypotension or shock
- ✓ Seizures
- ✓ Nausea

DIFFERENTIAL
- ✓ Fever (infection)
- ✓ Dehydration
- ✓ Medications
- ✓ Hyperthyroidism (Storm)
- ✓ Delirium Tremens (DT's)
- ✓ Heat cramps
- ✓ Heat exhaustion
- ✓ Heat stroke
- ✓ CNS lesions or tumors

Universal Patient Care Protocol

R	Document patient temperature	R
	Remove clothing	
	Remove from heat source	
	Apply room temperature water to skin and increase air flow around patient	
P	**Cardiac Monitor**	P
T	**12 Lead EKG** if available	T
A	**IV Access Protocol** **Normal Saline Bolus** 250 ml(may repeat)	A

Monitor and reassess

Appropriate Protocol
Based on Patient's symptoms

M	**Contact Medical Control and Notify Destination**

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

PEARLS
- ✓ Extremes of age are more prone to heat emergencies
- ✓ Predisposed by use of: tricyclic antidepressants, phenothiazines, anticholinergic medications
- ✓ Cocaine, amphetamines, and salicylates may elevate body temperature
- ✓ Sweating generally disappears as body temperature rises above 104º F (40º C)
- ✓ Intense shivering may occur as patient is cooled
- ✓ Heat cramps consist of benign muscle cramping secondary to dehydration and is not associated with an elevated temperature
- ✓ Heat exhaustion consists of dehydration, salt depletion, dizziness, fever, mental status changes, headache, cramping, nausea, and vomiting. Vitals signs usually consist of tachycardia, hypotension, and an elevated temperature
- ✓ Heat stroke consists of dehydration, tachycardia, hypotension, temperature >104º F (40º C) and an altered mental status

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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HYPOTHERMIA
TRAUMA PROTOCOL # 5 - 09

HISTORY
- ✓ Past medical history
- ✓ Medications
- ✓ Exposure to environment even in normal temperatures
- ✓ Exposure to extreme cold
- ✓ Extremes of age
- ✓ Drug use: alcohol, barbiturates
- ✓ Infections/Sepsis
- ✓ Length of exposure/Wetness

SIGNS AND SYMPTOMS
- ✓ Cold, clammy
- ✓ Shivering
- ✓ Mental status changes
- ✓ Extremity pain or sensory abnormality
- ✓ Bradycardia
- ✓ Hypotension or shock

DIFFERENTIAL
- ✓ Sepsis
- ✓ Environmental exposure
- ✓ Hypoglycemia
- ✓ CNS dysfunction
  - Stroke
  - Head injury
  - Spinal cord injury

Universal Patient Care Protocol

A — **Cardiac Monitor** — A

R — **Temperature < 95º F (35º C)** — R

YES

R — Handle very gently
Remove wet clothing
Hot packs and blankets — R

T — **12 Lead EKG** if available — T

A — Consider **Narcan 0.4 - 2 mg IV** — A

NO

Appropriate Protocol
based on patient's symptoms

M — **Contact Medical Control and Notify Destination** — M

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

TRAUMA PROTOCOL # 5 - 09

PEARLS
- ✓ NO PATIENT IS DEAD UNTIL WARM AND DEAD (core temperature >95º)
- ✓ Extremes of age are more susceptible to hypothermia
- ✓ With temperatures less than 86º F (30º C), ventricular fibrillation is common cause of death. Handling patients gently may help prevent this
- ✓ If the temperature cannot be measured, treat the patient based on suspected temperature
- ✓ Hypothermia may produce severe bradycardia so take at least 45 seconds to palpate a pulse
- ✓ Hot packs can be activated and placed armpit and groin area if available. Care should be taken not to place packs directly against patient's skin
- ✓ Consider withholding CPR if patient has organized rhythm or other signs of life. Contact Medical Control
- ✓ Intubation can cause ventricular fibrillation; the most proficient person should perform this skill gently
- ✓ Do not hyperventilate the patient as this can cause ventricular fibrillation
- ✓ If the patient is below 86ºF (30ºC), then defibrillate 1 time if defibrillation is required. Normal defibrillation procedure may resume once patient reaches 86ºF (30ºC)
- ✓ Anti-arrhythmics may not work below 86ºF (30ºC), and if given, should be administered at reduced intervals. Contact Medical Control before administering
- ✓ Pacing should not be done below 86ºF (30ºC)

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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MULTI-SYSTEM TRAUMA
TRAUMA PROTOCOL # 5 - 10

HISTORY
- ✓ Time and mechanism of injury
- ✓ Damage to structure or vehicle
- ✓ Location in structure or vehicle
- ✓ Others dead or injured
- ✓ Speed and details of MVC
- ✓ Restraints and protective equipment
- ✓ Past medical history
- ✓ Medications

SIGNS AND SYMPTOMS
- ✓ Pain, swelling
- ✓ Deformity, lesions, bleeding
- ✓ Altered mental status or unconscious
- ✓ Hypotension or shock
- ✓ Arrest

DIFFERENTIAL (LIFE THREATENING)
- ✓ Chest: Tension pneumothorax, Flail chest, Cardiac tamponade, Open chest wound, Hemothorax
- ✓ Spine Fractures/Spinal Cord Injury
- ✓ Intra-abdominal bleeding
- ✓ Pelvis/femur fracture
- ✓ Head injury (see Head Trauma)
- ✓ Laryngeal fracture/ airway obstruction
- ✓ Hypothermia

TRAUMA PROTOCOL # 5 - 10

Universal Patient Care Protocol

Spinal Immobilization Procedure

Airway Protocol

R | **Vital signs including GCS** | R

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

ABNORMAL

Rapid Transport to appropriate destination using
Trauma Field Criteria Destination Protocol
LIMIT SCENE TIME TO 10 MINUTES
PROVIDE EARLY NOTIFICATION

A	**IV Access Protocol** **Normal Saline bolus** 250 ml May repeat for hypotension	A
R	**Splint** suspected fractures Consider **pelvic binding** **Control external hemorrhage**	R
P	Tension pneumothorax? **Chest decompression**	P
P	Consider **Tranexamic Acid (TXA)** if at risk for significant hemorrhage	P

Consider **Head Injury Protocol**

NORMAL

R	Complete assessment	R
R	**Splint** suspected fractures Consider **pelvic binding** **Control external hemorrhage**	R
	Transport to appropriate destination using **Trauma Field Criteria Destination Protocol**	
R	Continually reassess	R
P	Consider **Tranexamic Acid (TXA)** if at risk for significant hemorrhage	P

M | **Contact Medical Control and Notify Destination** | M

PEARLS
- ✓ Transport Destination is based on the EMS System Trauma Plan with EMS pre-arrival notification
- ✓ Geriatric patients should be evaluated with a high index of suspicion. Often occult injuries are more difficult to recognize
- ✓ Mechanism is the most reliable indicator of serious injury
- ✓ In prolonged extrications, serious multi-system trauma, or traumatic brain injury, consider air transport
- ✓ Early administration of **TXA**(less than **1 hour** from injury) provides increased benefit, and must be given within **3 hours** of injury
- ✓ **TXA** should be given as a single 2g IV/IO slow push
- ✓ Scene times should not be delayed for procedures and should be performed en route when possible
- ✓ Rapid transport of the unstable trauma patient is the goal
- ✓ BVM is an acceptable method of managing the airway if pulse oximetry can be maintained >90%

TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES

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SEXUAL ASSAULT TRAUMA PROTOCOL # 5 - 11

HISTORY
- ✓ Complaint of sexual assault
- ✓ Drugs or alcohol – patient may not be able to recall the assault or events preceding the assault

SIGNS AND SYMPTOMS
- ✓ Unable to recall events
- ✓ Physical signs may or may not be present on initial exam
- ✓ Emotional stress
- ✓ Flat affect

DIFFERENTIAL
- ✓ PTSD/Anxiety
- ✓ Multisystem Trauma
- ✓ Sexually Transmitted Diseases

Universal Patient Care Protocol

R	**Scene Safety** Notify **Law Enforcement** if not already done	R
R	Discourage patient from changing clothes, showering, going to the bathroom, brushing teeth, drinking fluids	R
R	Do not examine the genital area unless apparent injuries in need of treatment	R
T	All linen used by patient in ambulance should be left with ED staff	T
M	**Contact Medical Control and Notify Destination**	M

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

PEARLS
- ✓ Early notification to trauma center ensures timely notification of Sexual Assault Nurse Examiner
- ✓ Collaborate with the police to determine what articles will be transported with the patient. Police may package evidence on scene or in the ED

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TRAUMATIC ARREST
TRAUMA PROTOCOL # 5 - 12

HISTORY
- ✓ Patient who has suffered traumatic injury and is now pulseless

SIGNS AND SYMPTOMS
- ✓ Evidence of penetrating trauma
- ✓ Evidence of blunt trauma

DIFFERENTIAL
- ✓ Medical condition preceding traumatic event as cause of arrest
- ✓ Tension pneumothorax
- ✓ Hypovolemic shock
  - External hemorrhage
  - Unstable pelvic fracture
  - Displaced long bone fracture(s)
  - Hemothorax
  - Intra-abdominal hemorrhage
  - Retroperitoneal hemorrhage

TRAUMA PROTOCOL # 5 - 12

Universal Patient Care Protocol

Patient with injury obviously incompatible with life in traumatic arrest?

YES → Notify **Coroner**
Notify **Law Enforcement** if not present on scene

NO → Known or suspected chest injury?

YES → P **Bilateral Chest Decompression** P

NO → **Spinal Immobilization Procedure**

A **IV Protocol Normal Saline bolus 250 ml** A

Return of Spontaneous Circulation?

YES → Go to **Appropriate Protocol**

NO → A Consider repeat **Normal Saline bolus 250 ml** A

Consider:
Reduction of long bone fracture (Hare traction)
Stabilization of pelvic fracture (T-pod or sheet)
Control of external hemorrhage

M **Contact Medical Control and Notify Destination** M

EARLY NOTIFICATION TO TRAUMA CENTER IF POSSIBLE

LEGEND	
R	EMR
T	EMT
A	AEMT
P	PARAMEDIC
M	MEDICAL CONTROL

PEARLS
- ✓ Do not attempt resuscitation if there is evidence of a non-survivable injury and no sign of life. Examples include decapitation, massive head/chest/abdominal trauma, or massive burns with charring
- ✓ Blunt trauma: consider field pronouncement if there are no signs of life. Signs of life include spontaneous movement, breathing, presence of a pulse, or reactive pupils
- ✓ Penetrating trauma: consider field pronouncement if there are no signs of life and estimated arrest duration is > 10 minutes
- ✓ Exceptions to the above recommendation to consider field pronouncement include arrests with the following mechanism/ scenarios: A. Hypothermic arrest B. Drowning with hypothermia and submersion <60 minutes C. Lightening strike and electrocution D. Avalanche victim E. Pregnant patient with estimated gestational age > 20 weeks
- ✓ Consider using cardiac arrest protocols if uncertainty exists regarding medical or traumatic cause of arrest
- ✓ Where use of spinal immobilization interferes with quality CPR, make reasonable efforts to manually limit patient movement