#### **EMT**

Ensure Scene Safety, Body Substance Isolation

- Provide Basic Airway Management procedures as needed
- Begin to acquire Pt. History to include S.A.M.P.L.E
- Control bleeding with direct pressure and elevate affected limb/area
- Gather and rinse grossly contaminated amputated parts and skin in Normal Saline and wrap in dry sterile gauze
- Place gauze wrapped parts in a plastic bag (clear bag)
- Place ice packs over or under the plastic bag (not both)
- Partial amputations should be splinted in anatomical position. Any amputations proximal to the ankle or wrist meet trauma alert criteria.
- Trendelenberg if patient can tolerate without objection
- Oxygen 15 lpm NRM
- Vital signs
- Activate Trauma Alert if criteria met

#### **Paramedic**

- Provide Advanced Airway Management if necessary
  - Apply monitor and interpret ECG (If time permits)
  - IV LR/NS KVO (maintain systolic BP 90 palp) (Largest bore possible)
  - Provide pain relief with Morphine 2mg increments up to 10 mg

### **EMT**

- Ensures Scene Safety, Body Substance Isolation
- Provide Basic Airway Management procedures as needed
- Oxygen 15 lpm NRM
- Pt. History to include S.A.M.P.L.E
- · Assessment & history of burn
- Vital signs
- Rinse 1st degree burns with cool NS to clean area
- Assess BSA using Rule of Nines
- Apply water-jel burn sheets for burns < 10% BSA (TC)</li>

### **Paramedic**

- Provide Advanced Airway Management as needed
  - Apply monitor and interpret ECG
  - Rinse 2nd degree areas of less than 10% & intact blisters with care not to rupture blister sacs
  - IV LR/NS KVO (If the administration of pain medication is expected)
  - Consider Morphine Sulfate 2mg increments (max 10mg) for severe pain

### **EMT**

- Ensures Scene Safety, Body Substance Isolation
- Provide Basic Airway Management procedures as needed
- Oxygen 15 lpm NRM
- Pt. History to include S.A.M.P.L.E
- Assessment & history of burn
- Vital signs
- Assess burn type and BSA by Rule of Nines and for Trauma Alert Criteria
- Apply dry sterile dressings for burns greater than >10% BSA (TC)

### **Paramedic**

- Evaluate for Trauma Alert Criteria if not done already
- Advanced Airway Procedures if necessary
- Cool the patients burn area only for 30-60 sec intervals PRN to avoid hypothermia
- Apply appropriate size dressing to burns and cover with a dry sheet
- Wrap entire patient in dry clean sheet to prevent wicking
- IV LR/NS largest bore possible (If hypotensive administer 20cc/kg bolus, keep systolic BP 90 palp)

## CHEMICAL BURNS - Chemtrec 800-262-8200, call Poison Control 800-222-1222

- Follow appropriate chemical removal procedures; may call for medical treatment advise or consult Emergency Response Guide (ERG)
- Remove affected clothing
- EYES -Irrigate copiously with Normal Saline (use IV tubing)

#### **Paramedic**

- Morphine 2 mg increments max of 10 mg (If necessary call ER doctor for additional pain management orders)
- Fentanyl 25 mcg increments max of 100 mcg IV/IO may be given instead of Morphine for pain.
- AGGRESSIVE AIRWAY CONTROL FOR PATIENTS WITH SIGNS OF INHALATION INJURY:
  - 3-3-2 Rule and assess difficult airway status
  - If difficult airway not anticipated, proceed with sedation:
    - Versed 2.5 mg (up to 10 mg max)
- Secure airway with ETT and re-oxygenate (due to swelling of the airway from smoke inhalation)
- If ETT intubation unsuccessful, consider re-sedation and secure the airway with a KingTube.

### **Paramedic**

## Only where NO significant mechanism of injury (MOI) has been determined:

- The following criteria shall be used to determine if a patient may be considered for a Range of Motion clearance for C-Spine
- Patients must meet all criteria and have no pain on active ROM and passive ROM
- The paramedic shall perform the following Hx and exam:
  - No loss of consciousness or evidence of ETOH or drug intoxication noted
  - The patient must be alert to time, place & events and be without a distracting injury such as facial injuries or fractures
  - The patient must have no neck or back pain prior to ROM exams
  - With passive rotation from right to left, the neck is without pain
  - With passive flexion and extension of the neck, the neck is without pain
  - With active rotation from right to left, the neck remains without pain
  - With active flexion and extension of the neck, the neck remains without pain
  - During any part of the exam if the patient complains of neck or back pain, immediately stop the exam and proceed with complete spinal motion restriction with c-collar, board, head-blocks and straps per protocol and transport to appropriate facility
  - If the above exam is completed without pain then the patient may continue to be treated without c-spine precautions

### **EMT/Paramedic**

# **Glasgow Coma Scale – Adult**

Best eye response: (Eyes)	Best verbal response: (Verbal)	Best motor responses: (Motor)		
-	-	6 Obeys Command		
-	5 Oriented, converses normally	5 Localizes painful stimuli		
4 Open eyes spontaneously	4 Confused, disoriented	4 Withdraws from pain		
3 Open eyes in response to voice	3 Utters inappropriate words	3 Decorticate posturing upon painful stimuli		
2 Opens eyes in response to painful stimuli	2 Incomprehensible sounds	Decerebrate posturing upon painful stimuli		
1 Does not open eyes	1 Makes no sounds	1 Makes no movements		

## Best eye response (Eyes)

- 4 Eyes opening spontaneously
- 3 Eyes opening to speech (Not to be confused with an awakening of a sleeping person; such patients receive a score of 4, not 3)
- 2 Eyes opening in response to pain (Patient responds to pressure on the patient's fingernail bed; if this does not elicit a response, sternum rub may be used)
- 1 No eye opening

## Best verbal response (Verbal)

- **5** Oriented (Patient responds coherently and appropriately to questions such as the patient's name and age; where they are and why; the year; month, etc.)
- **4** Confused (The patient responds to guestions coherently but there is some disorientation and confusion)
- 3 Inappropriate words (Random or exclamatory articulated speech, but no conversational exchange)
- 2 Incomprehensible sounds (Moaning but no words; unintelligible)
- 1 None

# **Best motor response (Motor)**

- 6 Obeys commands (The patient does simple things as asked)
- **5** Localizes to pain (Purposeful movements towards painful stimuli; e.g. hand crosses mid-line towards the sternum during sternum rub)
- 4 Withdraws from pain (Pulls part of body away when pinched; normal flexion)
- 3 Flexion in response to pain (Decorticate response)
- **2** Extension to pain (Decerebrate response: adduction, internal rotation of shoulder, pronation of forearm)
- 1 No motor response

The Glasgow Coma Score is the total of all three numbers (eye, verbal & motor) added together (lowest = 3 and highest = 15)

### **EMT/Paramedic**

# **Glasgow Coma Scale – Pediatric**

Best eye response: (Eyes)	Best verbal response: (Verbal)	Best motor responses: (Motor)	
-	-	6 Moves spontaneously or purposefully	
-	5 Coos or babbles/normal activity or speech	5 Withdraws from touch	
4 Eyes opening spontaneously	4 Irritable and continually cries	4 Withdraws from pain	
3 Eyes opening to speech	3 Cries to pain	3 Abnormal flexion to pain for an infant or child (decorticate response)	
2 Eyes opening to pain	2 Moans to pain	2 Extension to pain (decerebrate response)	
1 No eye opening	1 No verbal response	1 No motor response	

## **During the first 6 months**

The best verbal response is normally a cry, though some infants make vocal responses during this period. The best motor response is usually flexion

## 6 to 12 months

The normal infant makes vocal noises

The infant will usually locate pain but not obey commands

## 12 months to 2 years

Recognizable words are expected

The child will usually locate pain but may not obey commands

## 2 years to 5 years

Recognizable words are expected

The Glasgow Coma Score is the total of all three numbers (eye, verbal & motor) added together (lowest = 3 and highest = 15)

### **EMT**

Ensure Scene Safety, Body Substance Isolation

- SPINAL MOTION RESTRICTION
- Provide Basic Airway Management procedure as needed
- Pt. History to include S.A.M.P.L.E
- Glasgow Coma scale for all head injuries
- Oxygen 15 lpm NRM
- Vital signs
- If trauma related injury then evaluate for Trauma Alert Criteria and request Air Transportation if criteria is met
- Check Blood Glucose; if less than 60 mg/dL administer Oral Glucose; after 20-30 min post Glucose recheck and give a second Oral Glucose if necessary IMPORTANT- Patient must be conscious/alert and able to safely swallow

## **Paramedic**

- Provide Advanced Airway Management procedures if as needed
- If Trauma Alert Criteria is met, verify status/ETA of Air Transportation
- If patient is posturing then hyperoxygenate @ 24/min to maintain ETCO<sup>2</sup> of 35-45 mmHg
- If patient is intubated, they need to be ventilated to a ETCO<sup>2</sup> of 35mmHg
- Apply ECG monitor and interpret ECG
- Check Blood Glucose: if less than 60 mg/dL admin 12.5 gm D50 IV (half the normal dose); repeat dose if Blood Glucose is still less than 60 mg/dL
- IV LR/NS TKO
- Calculate GCS for all head injuries
- For seizures:
  - Valium 5 mg increments slow IV over 30 sec; max dose of 10 mg
- If signs of acute increased ICP or a pt has a blown pupil then contact physician for:
  - Lasix 40mg IV push slow
  - Solumedrol 125mg slow IV push over 2 min

#### Paramedic

- Perform a 12 lead, if patient is stable
- All unconscious severe head injury patients should be intubated and ventilated at 12/min, without compromising C-spine:
- **▼** Refer to Airway Rescue Protocol

Cushing's Reflex (increasing blood pressure, decreasing pulse rate and irregular respirations) is a sign of increased ICP.

## **EMT**

Ensure Scene Safety, Body Substance Isolation

- Provide Basic Airway Management procedures as needed
- SPINAL MOTION RESTRICTION
- Rapid Trauma Assessment
- Oxygen 15 lpm NRM OR BVM
- Vital signs
- Trendelenberg if patient can tolerate without objection
- Pt. History to include S.A.M.P.L.E
- Utilize progressive bleeding control measures (bandage, direct pressure, tourniquet) as applicable to control active bleeding

#### **Paramedic**

- Advanced Airway Procedures if necessary
- Apply ECG Monitor and interpret ECG
- Excluding minor injuries, all trauma patients should have a large bore IV or IO access with NS/LR This skill should be performed enroute to the hospital (unless patient is entrapped) to avoid on-scene time delays
- Administer fluids cautiously to maintain BP to 90 systolic

### **Paramedic**

 Patient combativeness secondary to trauma may be controlled with Valium 5mg IV or 10 mg IM

# If airway is endangered:

AIRWAY RESCUE PROTOCOL

# If airway is NOT endangered:

- Refer to the <u>Basic and Advanced Airway</u> <u>Management Protocol</u>
- Rapid transport to appropriate receiving facility
- "Minimize scene time"

### **EMT**

Ensure Scene Safety, Body Substance Isolation

- Spinal Motion Restriction if trauma/injury suspected
- Provide Basic Airway Management procedures and supplemental oxygen as needed
- Pt. History to include S.A.M.P.L.E (Ascertain from Law Enforcement the patient's condition from time of Taser discharge until Fire Rescue's arrival)
- Vital signs

#### **Paramedic**

- Provide Advanced Airway Management procedures if necessary
- Apply monitor and interpret ECG
- Large Bore IV LR/NS wide open, if abnormal vital signs
- Assess for injury/illness and treat per specific protocol
- If Blood Glucose is less than 60 mg/dL administer D50 25 mg IV; perform a second Blood Glucose test

# IF PRONGS EMBEDDED - DO NOT REMOVE PRONGS (Transport is deemed necessary)

- Stabilize prongs with 4x4's and tape
- Ensure that Law Enforcement Officer accompanies patient to ER if patient is compative or under arrest.

## PRONGS NOT INTACT: (removed prior to EMS arrival)

- Assess patient and determine if transport is deemed necessary
- Restrain patient as needed (utilize LEO assistance for safety)
- If other findings are inconclusive, apply monitor and interpret 12 lead to r/o cardiac involvement if patient is stable
- Obtain oral/axillary temperature
- Confirm 4-point restraint security
- If no abnormal vital signs or complaints, prongs are not embedded and transport to ED is deemed not necessary, have patient sign release form and turn over to Law Enforcement

Approach these patients with caution: The greatest predictor of aggressive behavior is prior aggressive behavior

Transport patients with any one of the following:

- Evidence of excited delirium ( euphoria, paranoia, unusual strength, disrobing, sudden onset of lethargy after resistance);
- Persistent, abnormal vital signs;
- History of findings consistent with amphetamines or hallucinogenic drug use;
- Cardiac history
- Altered LOC or aggressive, violent behavior including resistance to evaluation;
- Evidence of hyperthermia; and Abnormal subjective complaints, including chest pain, SOB, nausea or headaches

Excited delirium patients are at high risk for sudden death and should be transported to a medical facility

### **EMT**

Ensure Scene Safety, Body Substance Isolation

- Pt. History to include S.A.M.P.L.E
- Provide Basic Airway Management procedures as needed
- Trendelenberg if patient can tolerate without objection
- Oxygen 15 lpm NRM or BVM @ 15 lpm O<sub>2</sub>
- Vital signs

### **Paramedic**

- Provide Advanced Airway Management procedures if necessary
- Apply Monitor and interpret ECG
- <u>Tension Pneumothorax</u>: JVD with hypotension, tachypnea, tachycardia, altered mental status and absent breath sounds on the affected side, cyanosis
  - IV KVO NS / LR
- <u>Massive Hemothorax</u>: Flat neck veins, pallor, hypotension, delayed to absent cap refill, tachycardia and absent breath sounds on the affected side
- IV NS / LR x 2 Large Bore Catheter
- 250cc fluid challenge IV bolus with NS / LR (or 20cc/kg fluid challenge)

#### **Paramedic**

Determine affected side and perform pleural decompression

Equipment needed: 14 gauge 3 ¼ catheter, 20cc syringe, betadine, 3 way stop cock, 2" tape, stethoscope

- Determine affected side of chest
- Locate insertion site: 2<sup>nd</sup> ICS anterior midclavicular line
- Prep with alcohol and betadine
- Attach catheter to syringe and draw back on syringe to break seal and then restore plunger to original position
- Insert catheter using a 90 degree angle
- Begin negative pressure on the syringe: a rush of air indicates a tension pneumothorax
- Disconnect the syringe and remove needle
- Place 3 way stop cock on catheter: if tension pneumothorax redevelops, briefly turn the valve to release the trapped air
- If syringe fills with blood on decompression, withdraw needle and stabilize catheter and stop cock: monitor for hypotension
- Secure catheter with tape

Diagnostic bilateral pleural decompressions should be performed on traumatic arrest patients

#### **Paramedic**

### Refer to the Trauma Alert Criteria Form:

#### **ADULT TRAUMA CRITERIA**

- Meets the State Trauma Alert Criteria: with any of the single criteria or at least two of the "two or more" criteria; or
- ▼ If the patient has a GCS of 12 or less, excluding patients with known GCS of 12 or less as their "normal level of consciousness"
- ▼ Patient does not meet any of the criteria listed above but, in the judgement of the EMT or Paramedic, should be transported as a Trauma Alert.
- The reason for the calling a Trauma Alert must be reported to the receiving facility (Trauma Center) as soon as possible without interfering with patient care. (i.e. call Ryder after the patient is turned over to the helicopter crew)
- The medic shall fill out the Trauma Alert Form and ensure it goes with the patient to the receiving facility or transporting unit (i.e. helicopter crew), per Florida Chapter 64J-1.014, and document any care provided and any pertinent scene and patient information on the form.

#### WHEN CALLING A TRAUMA ALERT DISPATCH SHOULD BE NOTIFIED OF THE FOLLOWING:

- ▼ Notify Dispatch using the words "Trauma Alert" to indicate that the patient meets the Trauma Alert Criteria
- ▼ Request Air Transportation (based on helicopter running orders)
- Working with the Fire Department, determine the Helispot (landing zone) and advise Dispatch

When calling a Trauma Alert based on Paramedic discretion, use assessment findings such as "upon deep palpation of chest and abdomen; findings such as pain, tenderness guarding or rebound tenderness are suggestive of blunt trauma with occult bleeding."

COMPONENT	Any two (2) meets Trauma Alert Criteria	Any one (1) meets Trauma Alert Criteria
AIRWAY <sup>1</sup>	☐ SUSTAINED RR > 30	☐ ACTIVE AIRWAY ASSISTANCE <sup>2</sup>
CIRCULATION	☐ SUSTAINED HR > 120	□ LACK OF RADIAL PULSE WITH SUSTAINED HEART RATE > 120 OR □ BP < 90
BEST MOTOR RESPONSE	□ BMR = 5	<ul> <li>□ BMR OF ≤ 4 OR</li> <li>□ EVIDENCE OF SPINAL CORD INJURY</li> <li>□ PARALYSIS or LOSS OF SENSATION</li> </ul>
CUTANEOUS	☐ TISSUE LOSS FROM EITHER MAJOR DEGLOVING INJURY OR A MAJOR FLAP AVULSION > 5 INCHES ☐ GSW TO EXTREMITIES	<ul> <li>□ AMPUTATION<sup>3</sup> OR</li> <li>□ 2<sup>0</sup>/3<sup>0</sup> BURNS TO &gt; 15% TBSA OR</li> <li>□ ANY PENETRATING INJURY TO</li> <li>HEAD, NECK, OR TORSO<sup>4</sup></li> </ul>
LONGBONE FRACTURE <sup>5</sup> -Humerus -Radius or Ulna -Femur -Tibia or Fibula	☐ SINGLE FX SITE DUE TO MVA☐ SINGLE FX SITE DUE TO FALL > 10 FEET	☐ TWO OR MORE LONGBONE FRACTURES. (EXCEPT FOR HIP FRACTURES AND ISOLATED WRIST OR ANKLE FRACTURES)
AGE	☐ AGE 55 OR OLDER	
MECHANISM OF INJURY	☐ EJECTION FROM VEHICLE <sup>6</sup> OR ☐ DEFORMED STEERING WHEEL <sup>7</sup>	<ul> <li>□ GCS ≤ 12 excluding patient's whose normal GCS is 12 or less</li> <li>□ Patient does not meet any of the trauma criteria listed above but, in the judgment of the EMT or Paramedic should be transported as a Trauma Alert</li> </ul>

- 1. Airway evaluation is designed to reflect the intervention required for optimum ventilation.
- 2. Beyond administration of oxygen
- 3. AMPUTATIONS proximal to the wrist or ankle.
- 4. Excluding superficial wounds in which the depth of the wound can be easily determined.
- 5. The sites of radius/ulna and tibia/fibula should be considered a SINGLE site.
- 6. Excluding any motorcycle, moped, all terrain vehicle, bicycle, or open body of pick up truck.
- 7. Resulting from patient impact

### **Paramedic**

Refer to the State Pediatric Trauma Alert Criteria:

### PEDIATRIC TRAUMA CRITERIA: FOR 15 YRS OLD OR LESS

- Meets the State Trauma Alert Criteria with any of the single criteria or at least two of the "two or more" criteria
- Patient does not meet any of the criteria listed above but, in the judgement of the EMT or Paramedic, should be transported as a Trauma Alert.
- The reason for the calling a Trauma Alert must reported to the receiving facility (Trauma Center) as soon as possible without interfering with patient care. (i.e. call Ryder after the patient is turned over to the helicopter crew)
- ▼ The medic shall document the Trauma Alert on a State of Florida HRS form and turn it over to the receiving facility or transporting unit, per Florida Chapter 64J-1.014, and include any care provided and any pertinent scene and patient information.

#### WHEN CALLING A TRAUMA ALERT DISPATCH SHOULD BE NOTIFIED OF THE FOLLOWING:

- · Notify Dispatch using the words "Trauma Alert" to indicate that the patient meets the Trauma Alert Criteria
- Request Air Transportation (based on helicopter running orders)
- · Working with the Fire Department, determine the Helispot (landing zone) and advise Dispatch

When calling a Trauma Alert based on Paramedic discretion, use assessment findings such as "upon deep palpation of chest and abdomen: findings such as pain, tenderness guarding or rebound tenderness are suggestive of blunt trauma with occult bleeding."

R = RED, any one (1) - transport as a trauma alert	B = BLUE, any two (2) - transport as a trauma alert	G = GREEN, follow local transport protocol
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SIZE	> 20 Kg (44+ lbs.)		11-20 Kg (24-44 lbs.)		< 11 Kg or LENGTH < 33 inches on a PEDIADIATRIC LENGTH AND WEIGHT	
		G		G	EMERGENCY TAP  □	
AIRWAY	Normal		SUPPLEMENTAL O <sub>2</sub>		ACTIVE AIRWAY ASSISTANCE	
		G		G		R
CONSCIOUSNESS	AWAKE		INCLUDES US OR CONTINU	ENTAL STATUS THAT NRESPOSIVE TO VOICE, ALLY LETHARGIC, O AROUSE, AMNESIA OR	INCLUDES UNRES	TAL STATUS THAT SPONSIVE TO PAIN OR PONSIVE OR EVIDENCE OF RALYSIS
		G		В		R
CIRCULATION	GOOD PERIPHE SBP > 90 mmHg □	,		BLE RADIAL OR ULSE OR THE SBP < 90 mm	NON PALPABLE C PULSES; SBP < 50	AROTID OR FEMORAL mmHg
LONGBONE FRACTURE <sup>1</sup> -Humerus -Radius or Ulna -Femur	NONE SEEN OR SUSPECTED			SED LONG BONE FX ISOLATED WRIST OR	SITES (EXCLUDIN	E FX SITE OR MULTIPLE FX G ISOLATED WRIST OR ULTIPLE DISLOCATIONS
-Tibia or Fibula		G		В		R
CUTANEOUS	NO VISIBLE IN CONTUSION or		CONTUSION	or ABRASION	FLAP AVULSION O 30 BURNS TO >109	UE DISRUPTION <sup>2</sup> OR MAJOR OR AMPUTATION <sup>3</sup> OR 20 OR % TBSA OR ANY JURY TO HEAD, NECK, OR
		G		G		R

- 1. The sites of radius/ulna and tibia/fibula should be considered a SINGLE site.
- 2. Degloving injuries, major flap avulsions, or *major* soft tissue disruption
- 3. Proximal to the wrist or ankle
- 4. Excluding superficial wounds in which the depth of the wound can be easily determined

