

## Loveland First Aid

### Problem# One

John is the Belt Examiner who is working with belt mechanic, Robert. They are trying to dislodge a rock in the 10 East Belt drive head pulley. As the rock came loose, the belt rotated backwards pulling John's right arm was pulled up, suspending him temporarily and through the pulley. Belt-man Robert was releasing the brake system on your arrival and John fell from the drive to the floor.

John's injuries are:

- Crushing fracture to the right radius and ulna, distal to the elbow.
- An open/compound fracture to the right humerus, proximal to the elbow.
- The right brachial artery was severed at the compound break, but the compression of the conveyor had slowed the bleeding.
- He also has a laceration, non-life threatening, bleeding on the inside of his left elbow.
- On release and drop, he now has a laceration on the on the back of his right knee and apparent dislocation of the same knee.
- Patient Assessment: Unconscious

Belt man Robert, now a bystander says he is on light duty from recent heart problems, and not feeling good.

Perform an initial assessment OPQRST and find:

- Discomfort in the chest region
- Pressure or tightness in the chest
- Pain or discomfort in the arm, back or neck region- usually on the left side
- Excessive sweating
- Shortness of breath, either on exertion or at rest
- Nausea
- Dizziness

At the 15 minute mark, Robert goes into cardiac rest.

He is in A-fib. Pulse is tachycardic @124 BPM BP is 157/112

Properly Treat All Medical Conditions and prepare for transport.

Unconscious  
Patient

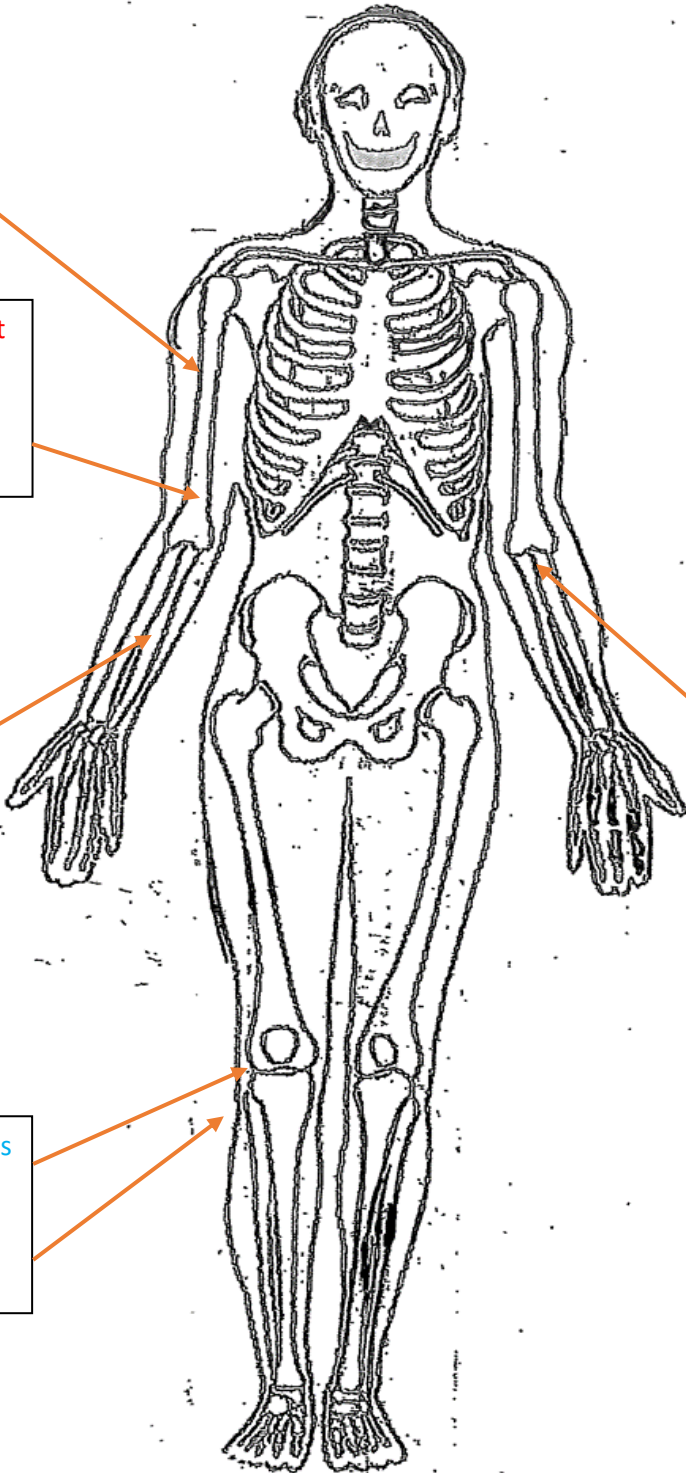
An open compound  
fracture to the humerus,  
proximal to the elbow.

The brachial artery was severed at  
the compound break, but the  
compression of the conveyor had  
slowed the bleeding.

Crushing fracture to the  
radius and ulna, distal to  
the elbow.

Laceration, non-life  
threatening, bleeding on the  
inside of his left elbow.

On release and drop, he now has  
a laceration on the on the back  
of his right knee and apparent  
dislocation of the same knee.



## INITIAL ASSESSMENT

PROCEDURES		CRITICAL SKILLS
1. SCENE SIZE UP	<input type="checkbox"/> <input type="checkbox"/>	A. *Observe area to ensure safety B. *Call for help
2. MECHANISM OF INJURY	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. *Determine causes of injury, if possible B. *Triage: Immediate, Delayed, Minor or Deceased. C. *Ask patient (if conscious) what happened
3. INITIAL ASSESSMENT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. *Verbalize general impression of the patient(s) B. *Determine responsiveness/level of consciousness (AVPU - Alert, Verbal, Painful, Unresponsive) C. *Determine chief complaint/apparent life threat
4. ASSESS AIRWAY AND BREATHING	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Correctly execute head-tilt/chin-lift or jaw thrust maneuver, depending on the presence of cervical spine (neck) injuries B. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds) C. If present, treat sucking chest wound
5. ASSESS FOR CIRCULATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Check for presence of a carotid pulse (5-10 seconds) If present, control life threatening bleeding Start treatment for all other life threatening injuries/conditions (reference Rule 2).

IMMEDIATE: Rapid Patient Assessment treating all life threats Load and Go. If the treatment interrupts the rapid trauma assessment, the **assessment** will be completed at the end of the **treatment**.

DELAYED: Detailed Patient Assessment treating all injuries and conditions and prepare for transport.

MINOR: (Can walk) Detailed Patient Assessment treating all injuries and conditions and prepare for transport. After all IMMEDIATE and DELAYED patient(s) have been treated and transported.

DECEASED: Cover

- **\*NOTE: Each critical skill identified with an asterisk (\*) shall be clearly verbalized by the team as it is being conducted.**
- **Teams may use the acronym “CSM” when checking circulation, sensation, and motor function.**

## PATIENT ASSESSMENT

1. HEAD	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. *Check head for BP-DOC: Bleeding, Pain, Deformities, Open wounds, Crepitus, B. *Check and touch the scalp, C. *Check the face, D. *Check the ears for bleeding or clear fluids E. *Check the eyes for any discoloration, unequal pupils, reaction to light, foreign objects, and bleeding F. *Check the nose for any bleeding or drainage G. *Check the mouth for loose or broken teeth, foreign objects, swelling or injury of tongue, unusual breath odor and discoloration
2. NECK	<input type="checkbox"/> <input type="checkbox"/>	A. Check the neck BP-DOC B. Inspect for medical ID
3. CHEST	<input type="checkbox"/>	A. Check chest area for BP-DOC

	<input type="checkbox"/> <input type="checkbox"/>	B. Feel chest for equal breathing movement on both sides C. Feel chest for inward movement in the rib areas during inhalations	
4. ABDOMEN	<input type="checkbox"/>	A. Check abdomen (stomach) for BP-DOC	
5. PELVIS	<input type="checkbox"/> <input type="checkbox"/>	A. *Check pelvis for BP-DOC B. *Inspect pelvis for injury by touch (Visually inspect and verbally state inspection of crotch and buttocks areas)	
6. LEGS	L	R	A. Check each leg for BP-DOC B. Inspect legs for injury by touch C. Unresponsive: Check legs for paralysis (pinch inner side of leg on calf) D. *Responsive: Check legs for motion; places hand on bottom of each foot and states "Can you push against my hand?" E. *Check for medical ID bracelet
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
7. ARMS	L	R	A. *Check each arm for BP-DOC B. Inspect arms for injury by touch C. Unresponsive: Check arms for paralysis (pinch inner side of wrist) D. *Responsive: Check arms for motion (in a conscious patient; team places fingers in each hand of patient and states "Can you squeeze my fingers?" E. *Check for medical ID bracelet
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

## ONE-PERSON CPR (MANIKIN ONLY)

PROCEDURES		CRITICAL SKILLS
1. RESCUER ESTABLISH UNRESPONSIVENESS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Tap or gently shake shoulders B. **"Are you OK?" C. Determine unconsciousness without compromising cervical spine (neck) injury D. "Call for help" E. "Get AED" ( <b>Note:</b> If AED is used, follow local protocol)
2. RESCUER MONITOR PATIENT FOR BREATHING	<input type="checkbox"/>	A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)
3. RESCUER CHECK FOR CAROTID PULSE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	B. Correctly locate the carotid pulse - on the side of the rescuer, locate the patient's windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and the muscle in the neck C. Check for presence of carotid pulse for 5 to 10 Seconds D. *Absence of pulse E. *Immediately start CPR if no pulse
4. POSITION FOR COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Locate the compression point on the breastbone between the nipples B. Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel C. Do not intentionally rest fingers on the chest D. Keep heel of your hand on chest during and between compressions
5. DELIVER CARDIAC COMPRESSION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Give 30 compressions B. Compressions are at the rate of 100-120 per minute C. Down stroke for compression must be on or through compression. D. Return to baseline on upstroke of compression
6. ESTABLISH AIRWAY	<input type="checkbox"/> <input type="checkbox"/>	A. Kneel at the patient's side near the head B. Correctly execute head-tilt/ chin-lift or jaw thrust maneuver depending on the presence of cervical spine injuries
7. VENTILATIONS BETWEEN COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Place barrier device (pocket mask / shield with one way valve) B. Give 2 breaths 1 second each C. Each breath - minimum of .8 (through .7 liter line on new manikins) D. Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of last down stroke to the start of the first down stroke of the next cycle.)

<p>8. CONTINUE CPR FOR TIME STATED IN PROBLEM</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths</p> <p>B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR</p> <p>C. Rescuer opens airway and checks for adequate breathing or coughing</p> <p>D. Rescuer checks for a carotid pulse</p> <p>E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set</p> <p>F. A maximum of 10 seconds will be allowed to complete ventilations and required pulse checks between sets (this will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle)</p>
<p>9. CHECK FOR RETURN OF PULSE</p>	<input type="checkbox"/> <input type="checkbox"/>	<p>A. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds)</p> <p>B. "Ask judge for presence of a pulse."</p>

## TWO-RESCUER CPR WITH AED (NO SPINAL INJURY - MANIKIN ONLY)

### PROCEDURES

### CRITICAL SKILLS

1. RESCUER ESTABLISH UNRESPONSIVENESS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Tap or gently shake shoulders B. **"Are you OK?" C. Determine unconsciousness without compromising cervical spine (neck) injury D. **"Call for help" E. **"Get AED" ( <b>Note:</b> If AED is used, follow local protocol)
2. RESCUER MONITOR PATIENT FOR BREATHING	<input type="checkbox"/>	A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)
3. RESCUER CHECK FOR CAROTID PULSE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Correctly locate the carotid pulse - on the side of the rescuer, locate the patient's windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and the muscle in the neck B. Check for presence of carotid pulse for 5 to 10 Seconds C. *Absence of pulse D. *Immediately starts CPR if no pulse
4. RESCUER POSITION FOR COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Locate the compression point on the breastbone between the nipples B. Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel. C. Do not intentionally rest fingers on the chest. Keep heel of your hand on chest during and between compressions.
5. RESCUER DELIVER CARDIAC COMPRESSION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Give 30 compressions B. Compressions are at the rate of 100 to 120 per minute C. Down stroke for compression must be on or through compression line D. Return to baseline on upstroke of compression
6. RESCUER ESTABLISH AIRWAY	<input type="checkbox"/> <input type="checkbox"/>	A. Kneel at the patient's side near the head B. Correctly execute head-tilt/chin-lift maneuver
7. RESCUER VENTILATIONS BETWEEN COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Place barrier device (pocket mask/shield with one way valve) on manikin B. Give 2 breaths 1 second each C. Each breath - minimum of .8 (through .7 liter line on new manikins) D. Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of last down stroke to the start of the first down stroke of the next cycle.)

8. CONTINUE CPR FOR TIME STATED IN PROBLEM	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths</p> <p>B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR</p> <p>C. Rescuer at patient's head maintains airway and checks for adequate breathing or coughing</p> <p>D. The rescuer at the patient's head shall feel for a carotid pulse</p> <p>E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set</p> <p>F. A maximum of 10 seconds will be allowed to complete ventilations and required pulse checks between sets (this will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle)</p>
9. RESCUER APPLIES THE AED (DURING THE FIFTH CYCLE OF COMPRESSIONS)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Rescuer continues compressions while other rescuer turns (simulated) on AED and applies pads.</p> <p>B. RESCUERS SWITCH rescuer clears victim, allowing AED to analyze. (Judges shall provide an envelope indicating a shockable or non-shockable rhythm)</p> <p>C. If AED indicates a shockable rhythm, rescuer clears victim again and delivers shock. *Verbalize shock given</p>
10. RESUME HIGH QUALITY CPR	<input type="checkbox"/> <input type="checkbox"/>	<p>A. Rescuer gives 30 compressions immediately after shock delivery (2cycles).</p> <p>B. Other rescuer successfully delivers 2 breaths.</p>
11. CHANGING RESCUERS	<input type="checkbox"/>	<p>A. Change of rescuers shall be made in 5 seconds or less and will be completed as outlined in the problem. Team must switch every 5 cycles in less than 5 seconds.</p>
12. CHECK FOR RETURN OF PULSE	<input type="checkbox"/> <input type="checkbox"/>	<p>B. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds)</p> <p>C. **Ask judge for presence of a pulse."</p>

## AIRWAY OBSTRUCTION (UNCONSCIOUS VICTIM – WITNESSED)

### PROCEDURES

### CRITICAL SKILLS

1. INITIALLY ASSESS LEVEL OF CONSCIOUSNESS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Tap or gently shake shoulders</p> <p>B. **“Are you OK?”</p> <p>C. Determine unconsciousness without compromising C-spine injury</p> <p>D. **“Call for help”</p> <p>E. **“Get AED” (<b>Note:</b> If AED is used, follow local protocol)</p>
2. MONITOR PATIENT FOR BREATHING	<input type="checkbox"/>	<p>A. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds)</p>
3. PULSE CHECK	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Correctly locate the carotid pulse - on the side of the rescuer, locate the patient’s windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and muscle in the neck</p> <p>B. Check for presence of carotid pulse for 5 to 10 seconds</p> <p>C. *Patient has pulse</p>
4. OPEN AIRWAY	<input type="checkbox"/> <input type="checkbox"/>	<p>A. Correctly execute head-tilt/chin-lift or jaw thrust maneuver depending on the presence of cervical spine (neck) injuries</p> <p>B. **“Look for foreign object”</p>
5. ATTEMPT VENTILATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Place barrier device on manikin</p> <p>Seal mouth and nose</p> <p>Attempt to give slow breath (1 second duration)</p> <p>*D. Identify if there is an obstruction</p>
6. CHECK POSITIONING	<input type="checkbox"/> <input type="checkbox"/>	<p>A. Re-establish airway using correct method and procedure</p> <p>*B. Identify continued presence of the obstruction</p>
7. POSITION FOR COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Locate the compression point on the breastbone between the nipples</p> <p>B. Place the heel of one hand on sternum the compression points and the other hand on top of the first so hands are parallel</p> <p>C. Do not rest fingers on the chest keep heel of your hand on chest during and between compressions.</p>

8. COMPRESSIONS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Give 30 compressions B. Compressions are at the rate of 100-120 per minute C. Down stroke for compression must be on or through compression line D. Return to baseline on upstroke of compression
9. OPEN AIRWAY	<input type="checkbox"/> <input type="checkbox"/>	A. Correctly execute head-tilt / chin-lift or jaw- thrust maneuver depending on the presence of cervical spine (neck) injuries B. **"Look for foreign object"
10. PERFORM FINGER SWEEP (IF OBJECT IS SEEN)	<input type="checkbox"/> <input type="checkbox"/>	A. Follow with finger sweep, only if the object is seen. (open mouth, grasping tongue and lower jaw with thumb and fingers, insert index finger of other hand down along inside cheek and deeply into throat in a hooking action) B. Grasp and remove foreign object
11. ATTEMPT VENTILATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Correctly make effort to administer breath B. Administer second breath, if first successful and check pulse C. If unsuccessful repeat sequence of compressions, mouth check, finger sweep (if object is visible) and attempt to ventilate

## LIFE-THREATENING BLEEDING

### PROCEDURES

### CRITICAL SKILLS

1. DIRECT PRESSURE AND ELEVATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	*A. Apply direct pressure with a gloved hand *B. Apply a dressing to wound (cover entire wound) and continue to apply direct pressure *C. Elevate the extremity except when spinal injury exists  *D. Bleeding has been controlled  *E. If controlled, bandage dressing in place
2. IF NOTIFIED THAT BLEEDING IS NOT CONTROLLED, APPLY TOURIQUET	<input type="checkbox"/>	A. Apply as per tourniquet skill sheet

### External Bleeding

#### To Control:

Direct pressure

Elevation & direct pressure

Last Resort Tourniquet

### Internal Bleeding

\*1. Monitor breathing and pulse

\*2. Keep patient still

\*3. Loosen restrictive clothing

\*4. Be alert if patient vomits

\*5. Nothing by mouth

\*6. Report possibility of internal bleeding as soon as EMS personnel arrive on

**TOURNIQUET**  
PROCEDURES

CRITICAL SKILLS

1. DETERMINE NEED OR USING TOURNIQUET	<input type="checkbox"/>  <input type="checkbox"/>	<p>A. If these conditions are met, a tourniquet may be the only alternative:</p> <ul style="list-style-type: none"> <li>• Direct pressure has not been successful in stopping bleeding</li> </ul> <p>B. Elevation of wound above heart has not been successful in stopping of bleeding</p>
2. SELECT APPROPRIATE MATERIALS	<input type="checkbox"/>	<p>A. Select a band that will be between 1-4 inches in width and can be wrapped six or eight layers deep for improvised tourniquet or select factory tourniquet.</p>
3. APPLY TOURNIQUET	<input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/>	<p><u>A.</u> <u>Factory Tourniquet</u>  <u>B.</u> Wrap band around the extremity proximal to the wound (one inch above but not on a joint)</p> <p><u>Improvised Tourniquet</u>  <u>A.</u> Apply a bandage around the extremity proximal to the wound (one inch above but not on a joint) and tie a half knot in the bandage</p> <ul style="list-style-type: none"> <li>• Place a stick or pencil on top of the knot and tie the ends of the bandage over the stick in a squareknot</li> <li>• Twist the stick until the bleeding is controlled, secure the stick in position</li> </ul>
4. APPLY PRESSURE WITH TOURNIQUET	<input type="checkbox"/> <input type="checkbox"/>	<p><u>A.</u> Do not cover the tourniquet with bandaging material  <u>B.</u> *Notify other medical personnel caring for the patient</p>
5. MARK PATIENT APPROPRIATELY	<input type="checkbox"/>	<p><u>A.</u> Mark a piece of tape on the patient's forehead "TQ" and time applied</p>
6. REASSESS	<input type="checkbox"/>	<p><u>A.</u> *Assess level of consciousness (AVPU), respiratory status, and patient response</p>

## DRESSINGS AND BANDAGING – OPEN WOUNDS

### PROCEDURES

### CRITICAL SKILLS

1. EMERGENCY CARE FOR AN OPEN WOUND	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<u>A.</u> Control bleeding <u>B.</u> *Prevent further contamination <u>C.</u> *Bandage dressing in place after bleeding has been controlled <u>D.</u> *Keep patient lying still
2. APPLY DRESSING	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<u>A.</u> Use sterile dressing <u>B.</u> Cover entire wound <u>C.</u> Control bleeding <u>D.</u> Do not remove dressing
3. APPLY BANDAGE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Do not bandage too tightly. B. Do not bandage too loosely. C. Cover all edges of dressing. D. Do not cover tips of fingers and toes, unless they are injured. E. Bandage from the bottom of the limb to the top (distal to proximal) if applicable.

Multiple wounds will be treated as per procedures listed in patient assessment.

#### Impaled Objects

1. \*Do not remove
2. Expose wound
3. Control bleeding
4. Stabilize with a bulky dressing; crisscross the layers
5. Tie 4in. wide cravats around to hold in place, or tape in place
6. \*Check for exit wound (treat when found)
7. Immobilize affected area

#### Impaled Objects in the Jaw

1. \*Examine, inside & outside
2. If end not impaled in mouth – pull it out
3. Position head for drainage: if spinal injury, immobilize 1st and tilt board
4. Dress outside of wound
5. \*Gauze on inside only if patient alert, (Simulate only in contest and state, "I would leave 3-4 inches of gauze outside of mouth.")

#### Impaled Objects in the Eye

1. Stabilize with 3 inch gauze or folded 4x4
2. Put cup (no Styrofoam) over object and allow cup to rest on roller gauze or 4x4
3. Secure cup with roller gauze (not over top of cup)
4. \*Cover uninjured eye too

#### Open Neck Wound (Serious or Life Threatening)

1. \*Gloved hand over wound
2. \*Occlusive dressing over wound- 2 inches larger than wound site
3. Gauze dressing over occlusive
4. Place roller gauze beside site and wrap around figure 8 under opposite arm

#### Abdominal Injury

1. \*Place on back with legs flexed at the knees (for closed or open wounds)

#### Additional Steps for Open Abdominal Wounds (Serious or Life Threatening)

1. \*Apply moist dressing, then an occlusive dressing
2. \*Cover the occlusive with pads or a towel for warmth
3. \*If an object is impaled in abs, stabilize it and do not flex legs- leave them in the position you found them.

#### Skull Fractures and Brain Injuries

1. \*Open airway with jaw thrust
2. Apply collar
3. \*Use loose gauze dressing- no direct pressure
4. \*Keep at rest, ask them questions
5. Don't elevate legs (on or off a backboard)
6. After entire body is immobilized- tilt back board, injured side down

## Amputations

1. \*1. Wrap in slightly moistened sterile dressing
2. Place in plastic bag or wrap in plastic
3. \*3. Keep part cool avoid freezing
4. \*4. Do not place in water or direct contact with ice
5. \*5. Transport with patient
6. Label with patient's name

### NOTE:

Slings are required for all wounds of upper extremities, including shoulder and armpit wounds. Slings will not be required for upper extremity burns. However, if a burn and

**TWO-PERSON LOG ROLL**

**PROCEDURES**

**CRITICAL SKILLS**

1. STABILIZE HEAD	<input type="checkbox"/>	A. *Stabilize the head and neck
2. PREPARING THE PATIENT	<input type="checkbox"/> <input type="checkbox"/>	A. When placing patient on board place board parallel to the patient B. Kneel at the patient's shoulders opposite the board (if used) leaving room to roll the patient toward knees Raise the patient's arm, if not injured (the one closer to the rescuer) above the patient's head.
3. PREPARING THE RESCUER	<input type="checkbox"/> <input type="checkbox"/>	A. Grasp the patient at the shoulder and pelvis area B. Give instructions to bystander, if used to support
4. ROLLING THE PATIENT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. While stabilizing the head, roll the patient toward the rescuer by pulling steadily and evenly at the shoulder and pelvis areas B. The head and neck should remain on the same plane as the torso C. Maintain stability by holding patient with one hand and placing board (if used) with other D. Roll the body as a unit onto the board (if used)(board may be slanted or flat) E. Place the arm alongside the body

## SPLINTING (RIGID) UPPER EXTREMITY FRACTURES AND DISLOCATIONS

PROCEDURES		CRITICAL SKILLS
1. CARE FOR FRACTURE	<input type="checkbox"/>	A. *Check for distal circulation, sensation, and motor function § Do not attempt to reduce dislocations (if applies)
2. IMMOBILIZING FRACTURE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Selection of appropriate rigid splint of proper length B. Support affected limb and limit movement C. Apply appropriate padded rigid splint against injured extremity D. Place appropriate roller bandage in hand to ensure the position of function E. Secure splint to patient with roller bandage, handkerchiefs, cravats, or cloth strips F. Apply wrap distal to proximal G. *Reassess distal circulation, sensation, and motor function
3. SECURING WITH SLING	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Place sling over chest and under arm B. Hold or stabilize arm C. Triangle should extend behind elbow on injured side D. Pull sling around neck and tie on uninjured side E. Pad at the neck (except when C-Collar is present) F. Secure excess material at elbow G. Fingertips should be exposed H. *Reassess distal circulation, sensation, and motor function
4. SECURING SLING WITH SWATHE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Use triangle cravat or factory swathe B. Swathe is tied around chest and injured arm C. *Reassess distal circulation, sensation, and motor function

### ELBOW (STRAIGHT POSITION)

Follow Procedures No. 1 and No. 2 above

### FINGER/FINGERS

Immobilize Fracture

1. Tape injured finger to an adjacent uninjured finger; or
2. Tape injured finger to a tongue depressor, aluminum splint, or pen and pencil
3. Secure with sling and swathe

### COLLAR BONE

Support and limit movement of affected area Follow Procedures No. 1, No. 3 and No. 4 above

### SHOULDER BLADE

Support and limit movement of affected area Follow Procedures No. 1, No. 3 and No. 4 above

**NOTE: Do not reposition dislocations**

## SPLINTING (SOFT) UPPER EXTREMITY FRACTURES AND DISLOCATIONS (WRIST AND HAND)

### PROCEDURES

### CRITICAL SKILLS

1. CARE FOR FRACTURE	<input type="checkbox"/> <input type="checkbox"/>	A. *Check for distal circulation, sensation, and motor function B. Do not attempt to reduce dislocations (if applies)
2. IMMOBILIZING FRACTURE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Support affected limb and limit movement B. Place two cravats (triangular bandage) under wrist/hand C. Place pillow length wise under wrist/hand, on top of cravats (pillow should extend past fingertips) D. Lower limb, adjust cravats to tie E. Tie cravats distal to proximal
3. SECURING WITH SLING	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Place sling over chest and under arm B. Hold or stabilize arm C. Triangle should extend behind elbow or injured side D. Secure excess material at elbow E. Fingertips should be exposed F. *Reassess distal circulation, sensation, and motor function
4. SECURING SLING WITH SWATHE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Use triangle cravat or factory swathe B. Swathe is tied around chest and injured arm C. *Reassess distal circulation, sensation, and motor function



	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	D. Carefully place patient on long spine board E. Secure the patient to the long spine board (if primary splint) F. *Reassess distal circulation, sensation, and motor function
6. REASSESS	<input type="checkbox"/>	A. *Assess patient response and level of comfort

### SPLINTING (SOFT) LOWER EXTREMITY FRACTURES AND DISLOCATIONS (ANKLE AND FOOT)

PROCEDURES		CRITICAL SKILLS
1. CARE FOR FRACTURE	<input type="checkbox"/> <input type="checkbox"/>	A. *Assess for distal circulation, sensation, and motor function B. Do not attempt to reduce dislocations (if applies)
2. IMMOBILIZING FRACTURE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Support affected limb and limit movement B. Place three cravats (triangular bandage) under ankle/foot C. Place pillow length wise under ankle/foot, on top of cravats (pillow should extend 6 inches beyond foot) D. Lower limb, adjust cravats to tie E. Tie cravats distal to proximal F. Elevate with blanket or pillow G. *Reassess distal circulation, sensation, and motor function

### SPLINTING UPPER EXTREMITY/LOWER EXTREMITY FRACTURES (AIR SPLINT)

PROCEDURES		CRITICAL SKILLS
1. CARE FOR FRACTURE	<input type="checkbox"/>	*Assess distal circulation, sensation, and motor function(fingers/toes)
2. IMMOBILIZE FRACTURE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Grasp above and below the injury site B. Maintain support C. Properly apply air splint D. Splint should be relatively free of wrinkles E. Inflate splint to point that slight dent can be made F. *Reassess distal circulation, sensation, and motor function (fingers/toes)
3. MONITOR AIR- INFLATED SPLINT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. *Periodically check for increase or decrease in pressure B. *Monitor pressure in splint with fingertip C. Make sure desired pressure is maintained D. *Reassess distal circulation, sensation, and motor function (fingers/toes)

**NOTE:** Air splints may not be used with open (protruding bones) fractures. Air splints may only be used on the lower part of the extremities (from below the elbow on the arm and below the knee to the leg).

# SHOCK

## PROCEDURES

## CRITICAL SKILLS

1. CHECK FOR SIGNS AND SYMPTOMS OF SHOCK	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	A. *Check restlessness; anxiety; altered mental status; increased heart rate; normal to slightly low blood pressure; mildly increased breathing rate; pale (or bluish) skin (in victim with dark skin examine inside of mouth and nailbeds for bluish coloration. B. *Check for cool, moist skin; sluggish pupils; and nausea and vomiting. C. *Check for weakness Ensure the ABCs are properly supported. Control external bleeding. Keep the patient in a supine position.
2. TREATMENT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	A. Ensure the ABCs are properly supported. B. Control external bleeding. C. Keep the patient in a supine position. D. *Calm and reassure the patient, and maintain a normal body temperature. E. Cover with blanket to prevent loss of body heat and place a blanket under the patient. (Do not try to place blanket under patient with possible spinal injuries) F. Continue to monitor and support ABCs G. Do not give the patient anything by mouth. Do not give any fluids or food and be alert for vomiting. H. *Monitor the patient's ABCs at least every five minutes. I. *Reassure and calm the patient

## IMMOBILIZATION – LONG SPINE BOARD (Backboard)

### PROCEDURES

### CRITICAL SKILLS

1. MOVE THE PATIENT ONTO THE LONG SPINE BOARD	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Rescuer One at the head must maintain in-line immobilization of the head and spine</p> <p>B. Rescuer One at the head directs the movement of the patient</p> <p>C. Other Rescuers control movement of the rest of body</p> <p>D. Rescuer Two position themselves on same side</p> <p>E. Upon command of Rescuer One at the head, roll patient onto side toward Rescuer Two.</p> <p>F. Quickly assess posterior body, if not already done</p> <p>G. Place long spine board next to the patient with top of board beyond top of head</p> <p>H. Place patient onto the board at command of the Rescuer at head while holding in-line immobilization using methods to limit spinal movement</p> <p>I. Slide patient into proper position using smooth coordinated moves keeping spine in alignment</p>
2. PAD VOIDS BETWEEN PATIENT AND LONG SPINE BOARD	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>A. Select and use appropriate padding</p> <p>B. Place padding as needed under the head</p> <p>C. Place padding as needed under torso</p>
3. IMMOBILIZE BODY TO THE LONG SPINE BOARD	<input type="checkbox"/>	<p>A. Strap and secure body to board ensuring spinal immobilization, beginning at shoulder, and working toward feet</p>
4. IMMOBILIZE HEAD TO THE LONG SPINE BOARD	<input type="checkbox"/> <input type="checkbox"/>	<p>A. Using head set or place rolled towels on each side of head</p> <p>B. Tape and/or strap head securely to board, ensuring cervical spine immobilization</p>
5. REASSESS	<input type="checkbox"/> <input type="checkbox"/>	<p>A. *Reassess distal circulation, sensation, and motor function</p> <p>B. *Assess patient response and level of comfort</p>

## IMMOBILIZATION OF CERVICAL SPINE

### PROCEDURES

### CRITICAL SKILLS

PROCEDURES		CRITICAL SKILLS
1. ESTABLISH AND MAINTAIN IN-LINE IMMOBILIZATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Place head in a neutral, in-line position unless patient complains of pain, or the head is not easily moved into position B. Place head in alignment with spine C. Maintain constant manual in-line immobilization until the patient is properly secured to a backboard with head immobilized
2. ASSESS CSM	<input type="checkbox"/>	A. *Assess distal circulation, sensation, and motor function (on all extremities)
3. ASSESS CERVICAL REGION AND NECK	<input type="checkbox"/> <input type="checkbox"/>	A. *Inspect and palpate for injuries or signs of injuries B. Remove clothing or jewelry as necessary
4. BANDAGE ANY WOUND	<input type="checkbox"/>	A. Any neck wounds
5. APPLY CERVICAL SPINE IMMOBILIZATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Apply properly sized collar or manual immobilization  <u>One piece C-collar</u> A. Select proper sized collar B. Apply collar C. Ensure that patient's head is not twisted during application D. Ensure airway is open after placement  <u>Two piece C-collar</u> A. Select proper sized collar B. Apply rear section to back of neck C. Center rigid support on spine D. Apply front section (overlaps rear section) E. Ensure chin rests in chin cavity F. Secure collar with Velcro straps G. Ensure airway is open after placement
6. SECURE HEAD TO APPROPRIATE IMMOBILIZATION DEVICE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A. Immobilize patient to appropriate immobilization device B. Use head set or place rolled blankets or towels on each side of head C. Tape and or strap head securely to appropriate immobilization device
7. REASSESS	<input type="checkbox"/> <input type="checkbox"/>	A. *Reassess distal circulation, sensation, and motor function B. *Assess patient response and level of comfort