SOUTHEAST REGIONAL

MINE RESCUE CONTEST

First Aid Problem

2022

Team Statement:

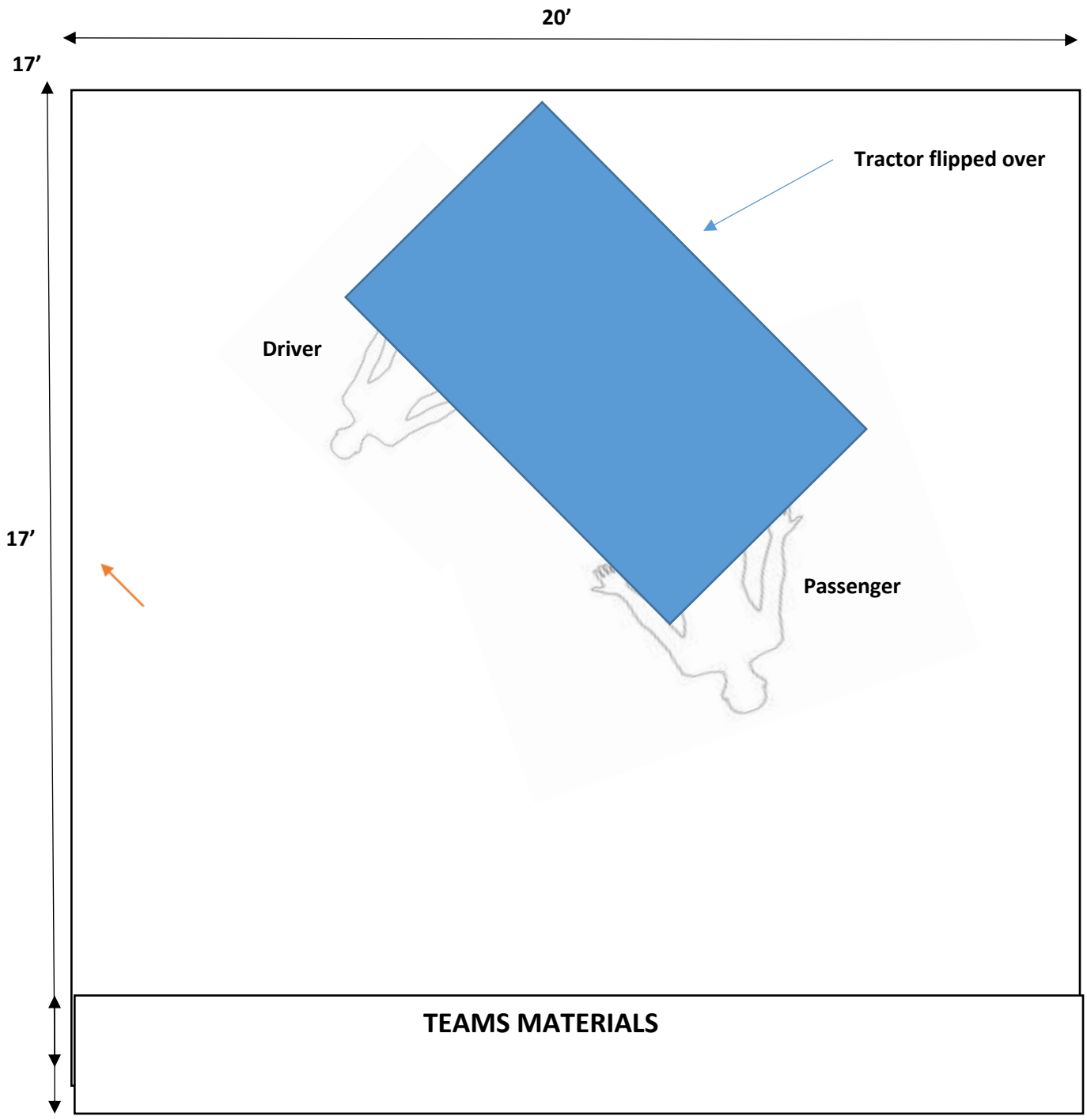
You and your team are dispatched to the main level intersection for a unknown problem. Upon arrival, you find a tractor incident with 2 patients possibly entrapped in the wreckage. The driver appears to be unresponsive and passenger in the back compartment appears to be in obvious pain as he is screaming for help.

Evaluator Notes:

1. **The tractor should be stabilized, and power D/C as tractor is still running. Failure to do so would equal team endangerment for all team members and discounted under scorecard A #11 – critical skill not ensuring scene safety… stash of cribbing material is provide near the scene.**
2. **When the power is D/C, the smoke machine and tractor sound/noise can be shut off… cutters are provided near the scene.**
3. **Following simple triage, the passenger is the highest priority patient. The driver should be checked 1st and then teams should move to the passenger following rules of triage.**
4. **The passenger should receive initial treatment and stabilization before moving back to the driver... ensure glove changes are happening between patients.**
5. **After teams initiate checking for vitals, the sheet with vitals will be given to the teams for each patient.**
6. **The time and problem starts when the scenario is given to the teams; problem and time stops once scenario is given back to the judge.**

All props will be shown on a table prior to teams starting the clock – without looking at the field set up.

Scene Set Up

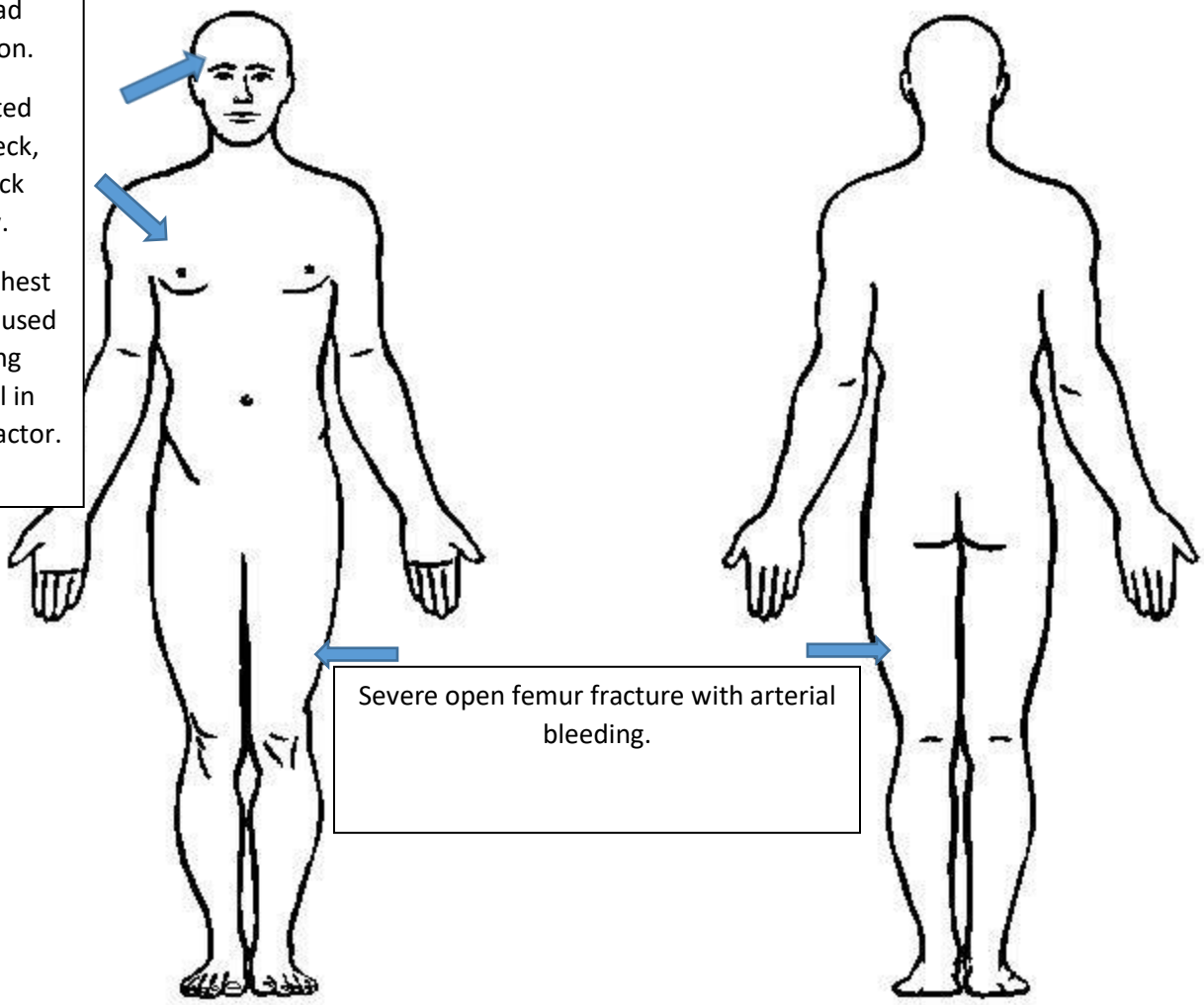

20’
17’
17’
Tractor flipped over
Driver
Passenger
TEAMS MATERIALS

Passenger

2in head laceration.

Suspected head, neck, and back injury.

Sucking chest wound caused by flying material in back of tractor.



Severe open femur fracture with arterial bleeding.

Right foot amputation at ankle – when pulled from back compartment, foot will remain under tractor; wound will bleed profusely; patient will go unresponsive – another card will be laid down to note this.

Orientation: Awake/Restless in severe pain

Airway: Open

Respirations: 18 / non-labored

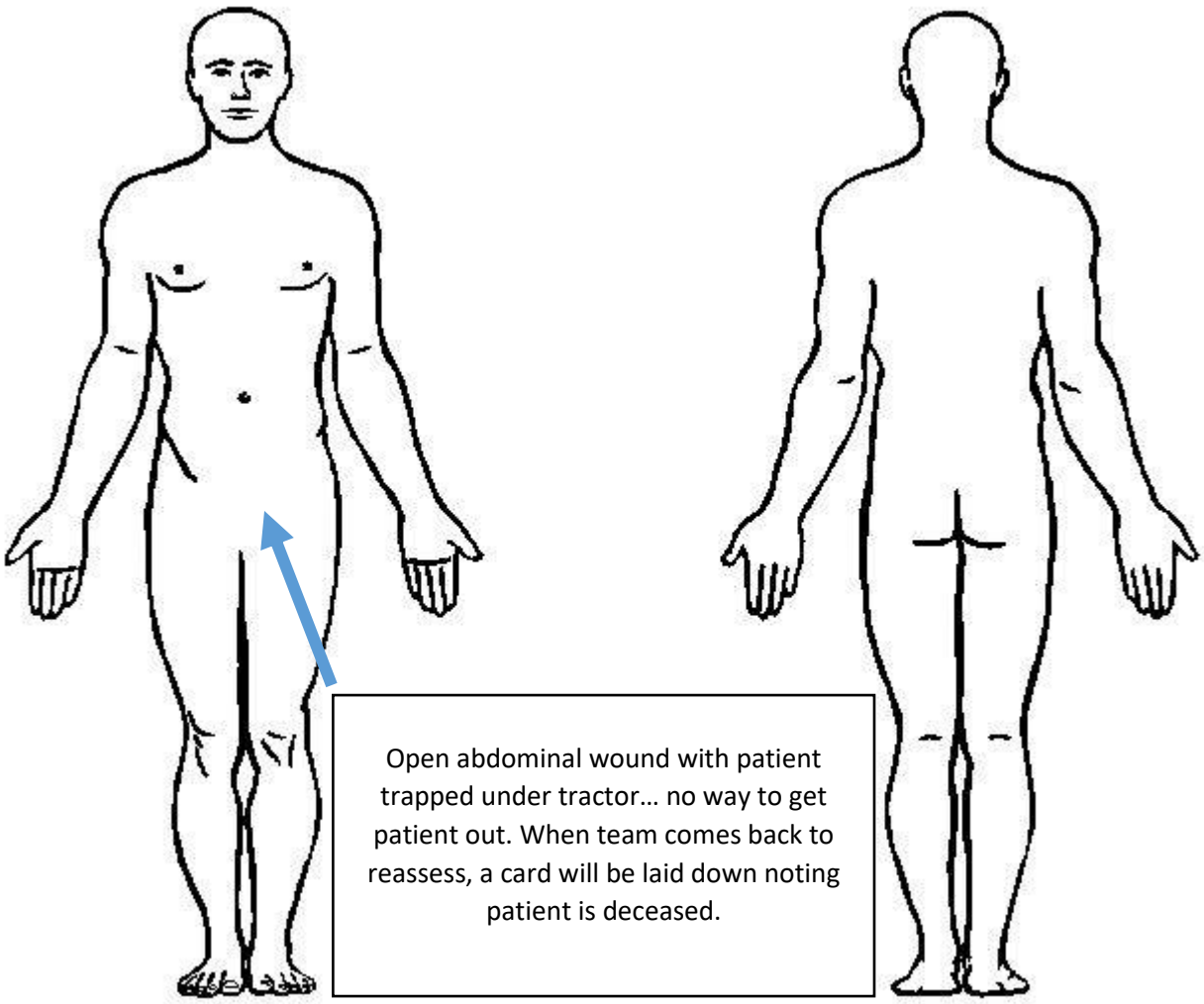
Circulation:

Arterial Bleed of the upper left leg

Cool and Clammy Skin/ Capillary Refill greater than 3 seconds

Pulse = 120

Driver



Open abdominal wound with patient trapped under tractor… no way to get patient out. When team comes back to reassess, a card will be laid down noting patient is deceased.

Orientation: Unresponsive

Airway: Open

Respirations: 6 and labored

Circulation:

Cool and pale skin

Pulse = No palpable radial pulse with a weak and slow carotid pulse at 30

Passenger

INITIAL ASSESSMENT

PROCEDURES		CRITICAL SKILLS
1. SCENE SIZE UP	□ □	*A. Observe area to ensure safety *B. Call for help
2. MECHANISM OF INJURY	□ □ □	*A. Determine causes of injury, if possible *B. Triage: Immediate, Delayed, Minor or Deceased. *C. Ask patient (if conscious) what happened
3. INITIAL ASSESSMENT	□ □ □	*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	□ □ □	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	□ □ □	A. Check for presence of a carotid pulse (5-10 seconds) B. If present, control life threatening bleeding C. 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

<u>*NOTE</u>: Each critical skill identified with an asterisk (*) shall be clearly verbalized by the team as it is being conducted.
After initially stating what BP-DOC- Bleeding, Pain, Deformities, Open wounds stands for, the team may simply state BP-DOC- Bleeding, Pain, Deformities, Open wounds when making their checks.

- **Teams may use the acronym "CSM" when checking circulation, sensation and motor function.**

Transportation is delayed: The Team will have to perform a full assessment and treat all injuries

1. **Arterial Bleed of the upper left leg with open fracture.**
2. **2in forehead laceration.**
3. **Sucking chest wound**
4. **RT foot amputation with profuse bleeding.**
5. **Head, neck, back injury.**

Passenger

LIFE-THREATENING BLEEDING

PROCEDURES		CRITICAL SKILLS
1. DIRECT PRESSURE AND ELEVATION	□ □ □ □ □	*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	□	A. Apply as per tourniquet skill sheet

External Bleeding

To Control: 1st: Direct pressure
2nd: Elevation & direct pressure
3rd: Last Resort: Tourniquet

Team is unable to control the arterial bleeding and must apply a tourniquet to the upper left leg, then lower right leg once pulled from tractor.

Passenger

TOURNIQUET

PROCEDURES		CRITICAL SKILLS
1. DETERMINE NEED OR USING TOURNIQUET	□ □	If these conditions are met, a tourniquet may be the only alternative: A. Direct pressure has not been successful in stopping bleeding B. Elevation of wound above heart has not been successful in stopping of bleeding
2. SELECT APPROPRIATE MATERIALS	□	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.
3. APPLY TOURNIQUET	□ □ □ □	<u>Factory Tourniquet</u> A. Wrap band around the extremity proximal to the wound (one inch above but not on a joint) <u>Improvised Tourniquet</u> B. 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 C. Place a stick or pencil on top of the knot and tie the ends of the bandage over the stick in a square knot D. Twist the stick until the bleeding is controlled, secure the stick in position
4. APPLY PRESSURE WITH TOURNIQUET	□ □	A. Do not cover the tourniquet with bandaging material *B. Notify other medical personnel caring for the patient
5. MARK PATIENT APPROPRIATELY	□	A. Mark a piece of tape on the patient's forehead "TQ" and time applied
6. REASSESS	□	*A. Assess level of consciousness (AVPU), respiratory status, and patient response

Once the tourniquet is applied, the judges should ask the team, "How do you know when the tourniquet is tight enough?" Appropriate answer will consist of: when the bleeding is controlled.

With the correct answer, the judges will inform the team that the bleeding is now controlled.

The Team should now start Patient Assessment

Tourniquet will be assessed twice for left leg and right foot.

Patient 1

PATIENT ASSESSMENT

PROCEDURES		CRITICAL SKILLS
1. HEAD	□ □ □ □ □ □ □	*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	□ □	*A. Check the neck BP-DOC *B. Inspect for medical ID
3. CHEST	□ □ □	*A. Check chest area for BP-DOC *B. Feel chest for equal breathing movement on both sides *C. Feel chest for inward movement in the rib areas during inhalations
4. ABDOMEN	□	*A. Check abdomen (stomach) for BP-DOC
5. PELVIS	□ □	*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
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
8. BACK SURFACES	□	*A. Check back for BP-DOC

Acute Findings

1. **2in laceration on forehead**
2. **Sucking chest wound**
3. **Open fracture of left femur**
4. **RT foot amputation with profuse bleeding**

Dressing and Bandaging of wounds will be evaluated 2 times

1. **Forehead**
2. **RT foot**

Passenger

DRESSINGS AND BANDAGING – OPEN WOUNDS

PROCEDURES		CRITICAL SKILLS
1. EMERGENCY CARE FOR AN OPEN WOUND	□ □ □ □	*A. Control bleeding *B. Prevent further contamination *C. Bandage dressing in place after bleeding has been controlled *D. Keep patient lying still
2. APPLY DRESSING	□ □ □ □	A. Use sterile dressing B. Cover entire wound C. Control bleeding D. Do not remove dressing
3. APPLY BANDAGE	□ □ □ □ □	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.

Passenger

(Sucking chest wound)

Sucking Chest Wound

PROCEDURES		CRITICAL SKILLS
1. EXPOSE WOUND	□	▪ *A. Expose entire wound
2. SEAL WOUND AND CONTROL BLEEDING	□	*A. Place occlusive dressing over wound (If occlusive dressing is not available use gloved hand) B. Apply direct pressure as needed to stop the bleeding
3. APPLY AN OCCLUSIVE DRESSING	□ □ □ □ □ □ □ □ □ □	A. Keep patient calm and quiet *B. Explain to the patient what you are doing *C. Ensure dressing is large enough not to be sucked into the wound (two inches beyond edges of wound) D. Affix dressing with tape *E. Seal on three sides *F. Monitor patient closely for increasing difficulty breathing *G. Transport as soon as possible H. Keep patient positioned on the injured side unless other injuries prohibit *I. Reassess wound to ensure bleeding control *J. Assess level of consciousness(AVPU), respiratory J. status and patient response

If teams do not leave one side of the occlusive dressing open, one minute after the occlusive dressing is applied, (judges will drop a card… do we need to do?) patient will stress to the team that he is becoming increasingly short of breath. Team will need to partially remove the occlusive dressing (one side) to allow air to escape to correct this issue.

When the following have been completed, the team should immobilize the patient to a long spine board. By using a 3 man

1. **Tourniquet applied and bleeding controlled x2.**
2. **Stabilization and immobilization of LT leg.**
3. **Application of Dressings and Bandages to head, chest, and right foot**

Patient 1

THREE-PERSON LOG ROLL

PROCEDURES		CRITICAL SKILLS
1. STABILIZE HEAD	□ □	*A. Stabilize the head and neck B. One rescuer should kneel at the top of the patient's head and hold or stabilize the head and neck in position found.
2. PREPARING THE PATIENT	□ □ □ □ □	A. A second rescuer should kneel at the patient's side opposite the direction the face is facing. B. When placing patient on board place board parallel to the patient. C. Quickly assess the patient's arms to ensure no obvious injuries. D. 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. E. The third rescuer should kneel at the patient's hips.
3. PREPARING THE RESCUER	□ □	A. Rescuers should grasp the patient at the shoulders, hips, knees, and ankles. *B. Give instructions to bystander (physically show), if used to support

4. ROLLING THE PATIENT	□	A. While stabilizing the head, the rescuer at the patient's head should signal and give directions, all rescuers should slowly roll the patient toward the rescuers in a coordinated move, keeping the spine in a neutral, in- line position.
	□	B. On three, slowly roll. One, two, three roll together.
	□	C. The head and neck should remain on the same plane as the torso, the rescuer holding the head should not initially try to turn the head with the body. (if the head is already facing sideways, allow the body to come into alignment with the head)
	□	D. Maintain stability by holding patient with one hand and placing board (if used) with other
	□	E. Roll the body as a unit onto the board (if used) (board may be slanted or flat) Center the patient on the board.
	□	F. Place the arm alongside the body

Passenger

IMMOBILIZATION – LONG SPINE BOARD (Backboard)

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

Properly sized Cervical Collar should be applied before the patient is secured to the long spine board with straps and cervical immobilization device. It is acceptable for the cervical collar to be applied immediately after palpation of the neck and before log rolling the patient.

Once the patient is fully immobilized, the patient should be assessed and treated for SHOCK.

Passenger

SHOCK

PROCEDURES		CRITICAL SKILLS
1. CHECK FOR SIGNS AND SYMPTOMS OF SHOCK	□	*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
2. TREATMENT	□	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

Once the team has treated the patient for shock, they can call for or simulate transport! Upon doing so, the scenario for the passenger is complete.

Upon completion of the scenario for the passenger, the team should move, evaluate, and assess the driver. No props should be needed as teams should know they have 2 patients. Failure to move to the driver and re-assess will be discounted appropriately.

Driver

INITIAL ASSESSMENT

PROCEDURES		CRITICAL SKILLS
1. SCENE SIZE UP	□	*A. Observe area to ensure safety
	□	*B. Call for help
2. MECHANISM OF INJURY	□	*A. Determine causes of injury, if possible
	□	*B. Triage: Immediate, Delayed, Minor or Deceased.
	□	*C. Ask patient (if conscious) what happened
3. INITIAL ASSESSMENT	□	*A. Verbalize general impression of the patient(s)
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	□	E. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds)
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5. ASSESS FOR CIRCULATION	□	D. Check for presence of a carotid pulse (5-10 seconds)
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Patient 2

Upon assessment, Patient 2 is unresponsive, not breathing, and no palpable radial or carotid pulse. In addition, the driver is trapped under the tractor with obvious severe abdominal injury. Teams are unable to determine the extent of other injuries.

A card will be dropped noting that patient is deceased after re-assessment. Teams must cover the deceased patient prior to stopping the clock per rule.

When teams hand the written statement back over, the problem is complete and time can be stopped.

Points of interest:

1. It is not uncommon for a team or provider to use different acronyms than what is used in the Brady 11th edition. It is of my opinion that not penalty should occur if a team member uses a different acronym but accurately assesses and treats the patient. The first example would be CSM and PMS, another example could be BP-DOCS and DCAPBTLS. Both memory aids are developed to help the rescuer remember the steps and are expected by the healthcare community. Regardless of the acronym/mnemonic used, the evaluation of performance should be made on the overall assessment and treatment and not which memory aid was used.
2. If a team elects to administer oxygen by NRB or use a BVM with CPR, I feel the treatment to be completely acceptable and even commendable. However, the way the score cards and evaluations are written, no clear direction or preference can be determined. It is for that reason, I do not believe the use of oxygen should be determined a wrong and no deduction of points should occur.