HARLAN MINE RESCUE CONTEST



FIRST AID PROBLEM

2015

YOU AND YOUR PARTNER ARE WORKING AT THE BIG ROCK SURFACE MINE. BUD, THE MECHANIC ON THE SITE, IS WORKING ON A **SPLIT RING TIRE ON A 10 WHEEL** TRUCK WHEN THE TIRE EXPLODES. **BUD IS STRUCK BY THE OUTER TIRE RING AND THE FORCE OF THE BLAST KNOCKS SNAKE, THE TRUCK DRIVER,** TO THE GROUND. YOU ARRIVE ON SCENE AND FIND BOTH MEN LYING **ON THE GROUND. SNAKE TELLS YOU** HE IS FINE AND ASKS YOU TO HELP **BUD. YOU CALL 911 AND ARE INFORMED THAT ALL AMBULANCES ARE BUSY WITH OTHER CALLS AND TRANSPORTATION WILL BE DELAYED. PLEASE HELP BUD AND SNAKE!**

INITIAL ASSESSMENT

PROCEDURES	CRITICAL SKILL
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	A. Check for presence of a carotid pulse (5-10 seconds)
CIRCULATION	B. If present, control life threatening bleedingC. 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**.

BUD IS AN IMMEDIATE PATIENT BUT UNDER RULE 14 TRANSPORTATION IS DELAYED SO TEAM WILL HAVE TO TREAT ALL INJURIES.

DISCOUNT TEAM IF THEY FAIL TO CHANGE GLOVES BETWEEN CONTACT WITH DIFFERENT PATIENTS! RULE 19

PATIENT ASSESSMENT

PROCEDURES	CRITICAL SKILL
	*A. Check head for DOTS: Deformities, Open wounds, Tenderness and Swelling
	*B. Check and touch the scalp
	*C. Check the face
	*D. Check the ears for bleeding or clear fluids
1. HEAD	*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 INCH CONTUSION ON RIGHT CHEEK NO TREATMENT REQUIRED

CUT IN LEFT EYE

FRACTURED ORBITAL SOCKET LEFT EYE

THIS SHOULD BE TREATED SIMILAR TO AN IMPALED OBJECT IN THE EYE. TREATMENT OF THE CUT WILL ALSO TREAT THE FRACTURED ORBITAL SOCKET.

DRESSINGS AND BANDAGING - OPEN WOUNDS

PROCEDURES

CRITICAL SKILL

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 dressingB. Cover entire woundC. Control bleedingD. Do not remove dressing
3. APPLY BANDAGE	 A. Do not bandage too tightly. B. Do not bandage too loosely. C. Do not leave loose ends. D. Cover all edges of dressing. E. Do not cover tips of fingers and toes, unless they are injured. F. Bandage from the bottom of the limb to the top (distal to proximal) if applicable.

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. <u>Cover uninjured eye too</u>

LOOSE AND BROKEN TEETH RIGHT MANDIBLE NO TREATMENT REQUIRED

CONTINUE PATIENT ASSESSMENT

2. NECK		*A. Check the neck for DOTS*B. Inspect for medical ID
---------	--	--

3. CHEST		 *A. Check chest area for DOTS *B. Feel chest for equal breathing movement on both sides *C. Feel chest for inward movement in the rib areas during inhalations
----------	--	--

FLAIL CHEST RIGHT RIB CAGE

SPLINTING - FLAIL CHEST

PROCEDURES	CRITICAL SKILL
1. DETERMINE NEED FOR SPLINTING	 *A. Assess for: Pain Swelling Deformity *B. Determine if splinting is warranted
2. SELECT APPROPRIATE SPLINTING MATERIAL	A. Choose a pillow, blanket, trauma dressing, or other appropriate splinting material
3. PREPARE FOR SPLINTING	*A. Remove or cut away clothing as needed.B. Cover any open wounds with sterile dressing and bandage
4. APPLY SPLINT	 A. Affix splint to chest with adhesive tape or roller bandage B. Immobilize the site of injury C. Use caution when taping splint to chest circumferentially *D. Ensure sufficient chest expansion
5. REASSESS	*A. Assess patient response and level of comfort
6. ASSIST VENTILATIONS	*A. Assist with ventilation as needed

CONTINUE PATIENT ASSESSMENT

4. ABDOMEN	*A. Check abdomen (stomach) for DOTS
5. PELVIS	 *A. Check pelvis for DOTS *B. Inspect pelvis for injury by touch (Visually inspect and verbally state inspection of crotch and buttocks areas)

	L	R		
			*A.	Check each leg for DOTS
			B.	Inspect legs for injury by touch
			C.	Unresponsive: Check legs for paralysis (pinch inner
6. LEGS				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?"
			*Е.	Check for medical ID bracelet

	L	R		
			*A.	Check each arm for DOTS
			В.	Inspect arms for injury by touch
			C.	Unresponsive: Check arms for paralysis (pinch inner
7 ARMS				side of wrist)
7. ANIVI5			*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?"
			*Е.	Check for medical ID bracelet

COMPOUND FRACTURE LEFT FOREARM

THIS IS ALSO AN OPEN WOUND AND WILL HAVE TO BE BANDAGED. INFORM TEAM THAT BLEEDING IS CONTROLLED AS SOON AS THEY ASK. WATCH TO ENSURE THAT SUPPORT OF THE FRACTURE IS MAINTAINED AS SOON AS IT IS IDENTIFIED

UNTIL IT IS SPLINTED.

PROCEDURES	CRITICAL SKILL
4. EMERGENCY CARE FOR AN OPEN WOUND	 *E. Control bleeding *F. Prevent further contamination *G. Bandage dressing in place after bleeding has been controlled *H. Keep patient lying still
5. APPLY DRESSING	E. Use sterile dressingF. Cover entire woundG. Control bleedingH. Do not remove dressing
6. APPLY BANDAGE	 G. Do not bandage too tightly. H. Do not bandage too loosely. I. Do not leave loose ends. J. Cover all edges of dressing. K. Do not cover tips of fingers and toes, unless they are injured. L. Bandage from the bottom of the limb to the top (distal to proximal) if applicable.

DRESSINGS AND BANDAGING - OPEN WOUNDS

SPLINTING (RIGID) UPPER EXTREMITY FRACTURES AND DISLOCATIONS

PROCEDURES	 CRITICAL SKILL
1. CARE FOR FRACTURE	 *A. Check for distal circulation, sensation, and motor function Do not attempt to reduce dislocations (if applies)
2. IMMOBILIZING FRACTURE	A. Selection of appropriate rigid splint of proper length

t id
d
id
7 ge in
<u>3</u> e m
ller
ts, or
lmotor
injured
ed side
lmotor
rm
l motor

CONTINUE PATIENT ASSESSMENT

8. BACK SURF	CES		*A.	Check back for DOTS
-----------------	-----	--	-----	---------------------

IMMOBILIZATION - LONG SPINE BOARD (Backboard)

PROCEDURES

CRITICAL SKILL

	m	ne First Aid Provider at the head must aintain in-line immobilization of the head nd spine
	B. Fi	irst Aid Provider at the head directs the ovement of the patient
	С. О	ther First Aid Provider control movement of the rest of body
	D. O	ther First Aid Provider position themselves
1. MOVE THE PATIENT ONTO THE LONG	E. U he	pon command of First Aid Provider at the ead, roll patient onto side toward First Aid
SPINE BOARD	F. Q	roviders uickly assess posterior body, if not already one
	G. Pl	lace long spine board next to the patient with op of board beyond top of head
	H. Pl Fi in	lace patient onto the board at command of the rst Aid Provider at head while holding in-line nmobilization using methods to limit spinal novement
	I. Sl	ide patient into proper position using smooth pordinated moves keeping spine in alignment
2. PAD VOIDS BETWEEN	A. Se	elect and use appropriate padding
PATIENT AND LONG		lace padding as needed under the head
SPINE BOARD		lace padding as needed under torso
3. IMMOBILIZE BODY TO THE LONG SPINE BOARD	in	rrap and secure body to board ensuring spinal nmobilization, beginning at shoulder and rorking toward feet
4. IMMOBILIZE HEAD		sing head set or place rolled towels on each de of head
TO THE LONG SPINE BOARD	B. Ta	ape and/or strap head securely to board, nsuring cervical spine immobilization
5. REASSESS		eassess distal circulation, sensation, and notor function
		ssess patient response and level of comfort

SHOCK

PROCEDURES CRITICAL SKILL 1. CHECK FOR SIGNS • AND SYMPTOMS OF • AND SYMPTOMS OF •

SHOCK	nailbeds for bluish coloration. *B. Check for cool, clammy skin *C. Check for weakness
2. TREATMENT	 A. Keep victim lying down B. 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) C. Elevate according to injury *D. Reassure and calm the patient

Option 1: Elevate the lower extremities or foot end of the back board. This procedure is performed in most cases. Place the patient flat, face up and elevate the legs or foot end of the back board 8 to 12 inches. Do not elevate any limbs with possible fractures or pelvic injuries until they have been properly splinted. Remember to consider the mechanism of injury for every patient.

GIVE TEAM ENVELOPE #1

SNAKE IS NOT BREATHING AND DOES NOT HAVE A PULSE. PLEASE HELP SNAKE!

AUTOMATED EXTERNAL DEFIBRILLATOR

	PROCEDURES	CRITICAL SKILL	
		A. Tap or gently shake shoulders	
1.	RESCUER 1 – ESTABLISH UNRESPONSIVENESS	*B. "Are you OK?"	

			C.	Determine unconsciousness without compromising cervical spine (neck) injury
			*D.	"Call for help"
			*E.	"Get AED" (Note: If AED is used, follow local protocol)
2.	RESCUER 1 – MONITOR PATIENT FOR BREATHING		А.	Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)
3.	RESCUER 1 - CHECK FOR CAROTID PULSE		А.	Correctly locate the carotid pulse – on the side of the rescuer, locate the patients' windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and the muscle in the neck
			В.	Check for presence of carotid pulse for 5 to 10 seconds
			*C.	Absence of pulse
			А.	Correct compression hand placement
	GIVES HIGH-QUALITY CPR		B.	Adequate Rate: At least 100/min. (i.e., delivers each set of 30 chest compressions in 18 seconds or less)
4.			C.	Adequate Depth: Delivers compressions at least 2 inches in depth (at least 23 out o 30)
			D.	Allows complete chest recoil (at least 23 out of 30)
			E.	Minimizes interruptions: Gives 2 breaths with pocket mask in less than 10 seconds
			А.	First rescuer continues compressions while second rescuer turns on AED and applies pads
5.	SECOND RESCUER ARRIVES WITH AED (DURING FIFTH		*B.	RESCUERS SWITCH - First rescuer clears victim, allowing AED to analyze
	SET OF COMPRESSIONS)			(Judges shall provide an envelope indicating a shockable or non-shockable rhythm)

1	

GIVE ENVELOPE #2

The AED has <u>NOT</u> detected a shockable rhythm.

AFTER TEAM STARTS CPR GIVE ENVELOPE #3

•

PERFORM 2 SETS OF 2 PERSON CPR

TW0-RESCUER CPR (NO SPINAL INJURY - MANIKIN ONLY)

PROCEDURES	 CRITICAL SKILL		
1. RESCUER 1 – ESTABLISH UNRESPONSIVENESS	A. *B. C. *D. *E.	Tap or gently shake shoulders "Are you OK?" Determine unconsciousness without compromising cervical spine (neck) injury "Call for help" "Get AED" (Note: If AED is used, follow local protocol)	
2. RESCUER 1 –	А.	Look for absence of breathing (no chest rise and fall)	

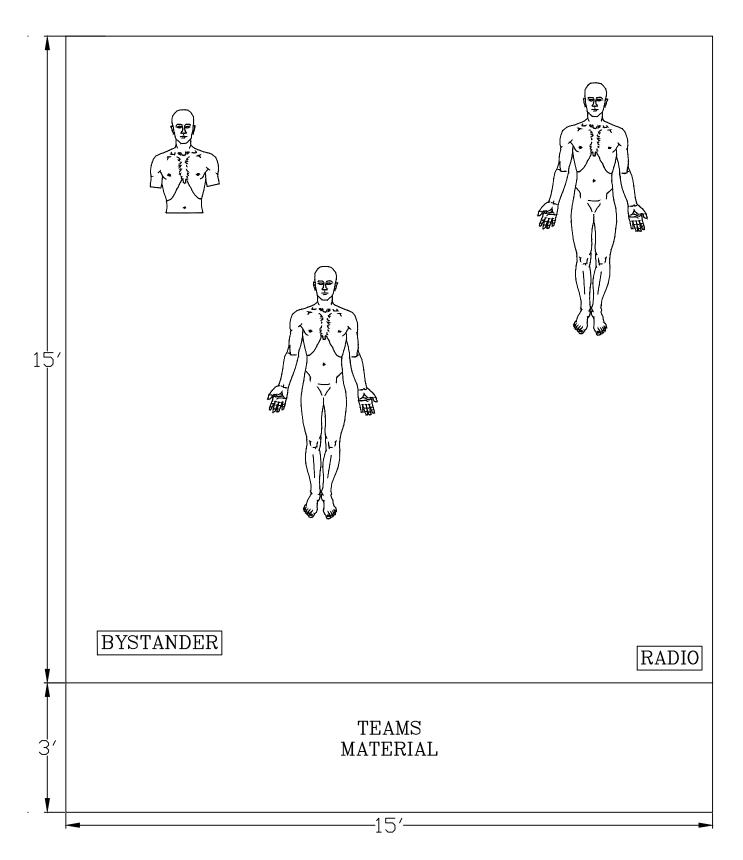
	MONITOR PATIENT FOR BREATHING		or gasping breaths, which are not considered adequate (within 10 seconds)
3.	RESCUER 1 - CHECK FOR CAROTID PULSE		 A. Correctly locate the carotid pulse - on the side of the rescuer, locate the patient's windpipe with your index and middle fingers and slide your fingers 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
4.	RESCUER 2 - POSITION FOR COMPRESSIONS		 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.	5. RESCUER 2 - DELIVER CARDIAC COMPRESSION		 A. Give 30 compressions B. Compressions are at the rate of at least 100 per minute (30 compressions delivered within 18 seconds) C. Down stroke for compression must be on or through compression line D. Return to baseline on upstroke of compression
6.	RESCUER 1 - ESTABLISH AIRWAY		A. Kneel at the patient's side near the headB. Correctly execute head-tilt/ chin-lift maneuver

7.	RESCUER 1 - VENTILATIONS BETWEEN COMPRESSIONS	 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	 A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR C. Rescuer at patient's head maintains airway and checks for adequate breathing or coughing D. The rescuer at the patient's head shall feel for a carotid pulse E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set 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
9.	CHANGING RESCUERS	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.
10.	CHECK FOR RETURN OF PULSE	 A. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds) *A. "Patient has a pulse."

GIVE TEAM ENVELOPE #4

EMS IS NOW ON SCENE AND HAS ASSUMED ALL PATIENT CARE.

FIELD LAYOUT



LIST OF INJURIES

BUD

2 INCH CONTUSION ON RIGHT CHEEK

CUT IN LEFT EYE

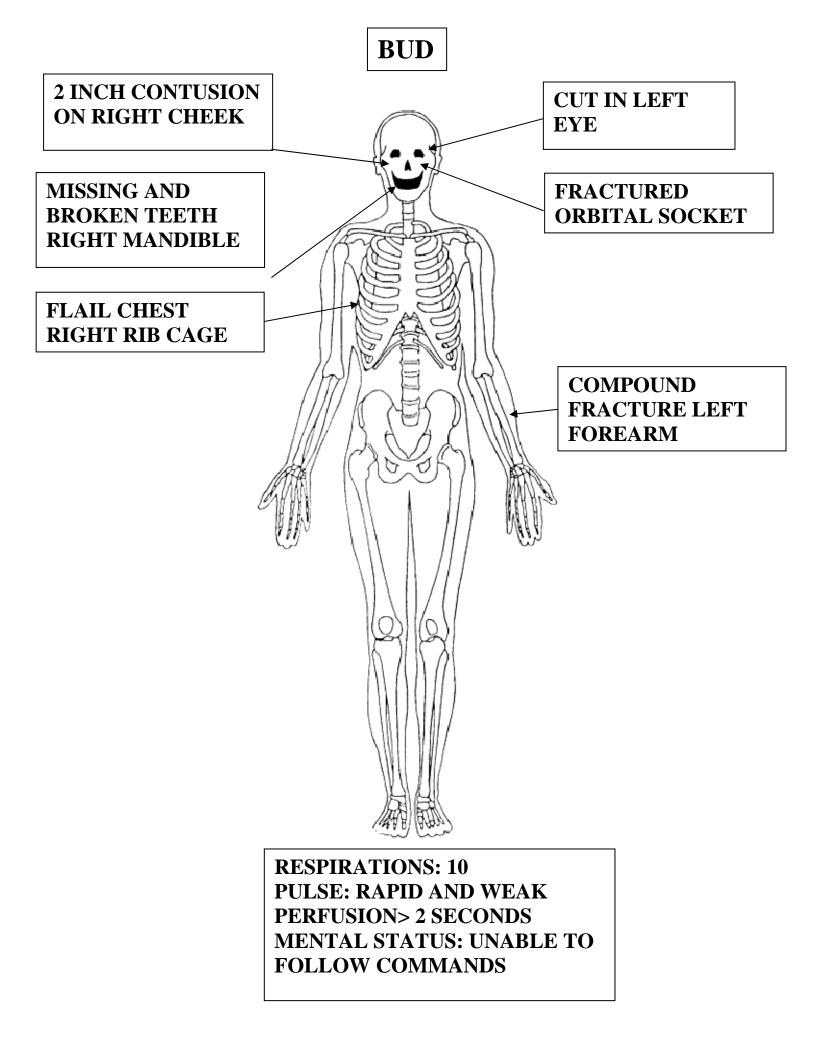
FRACTURED ORBITAL SOCKET LEFT EYE

MISSING AND BROKEN TEETH RIGHT MANDIBLE

FLAIL SEGMENT OF RIGHT RIBS

COMPOUND FRACTURE LEFT FOREARM

RESPIRATIONS: 10 PULSE: RAPID AND WEAK PERFUSION> 2 SECONDS MENTAL STATUS: UNABLE TO FOLLOW COMMANDS



LIST OF INJURIES

SNAKE

NO OBVIOUS INJURIES

RESPIRATIONS: 26 PULSE: RAPID PERFUSION< 2 SECONDS MENTAL STATUS: ABLE TO FOLLOW COMMANDS

SNAKE IS NOT BREATHING AND DOES NOT HAVE A PULSE.

PLEASE HELP SNAKE!

The AED has <u>NOT</u> detected a shockable rhythm.

PERFORM 2 SETS OF 2 PERSON CPR

EMS IS NOW ON SCENE AND HAS ASSUMED ALL PATIENT CARE.

HARLAN MINE RESCUE FIRST AID CONTEST

CHIEF JUDGE: GARY OLIVER

ASSISTANT CHIEF JUDGE: LARRY BOGGS

FINAL APPEALS: KEVIN BRUNER JIM LUNDY

WRITTEN EXAM/TEAM APPEALS: JASON SNELL

CPR TAPES: MICHELLE ABNER DEBBIE COMBS

PATIENT PREPARER: ALICE BLANTON

CHAIRMAN	JUDGE	JUDGE/TIMEKEEPER	BYSTANDER
BJ FOSTER	JOHN BOYLEN	KEN MC CLUNG	DANNY LEWIS
CARLA MARCUM	KEVIN TURNER	MIKE NAPIER	LONNIE CURNUTT
JOHN ED CURRY	ADRON WILSON	RANDY LEWIS	JACK HARRIS

Circle the correct answer

- 1. When properly applied, a sling and swathe will adequately immobilize a:
 - a. wrist.
 - b. forearm.
 - c. shoulder.
 - d. knee.
- 2. The process of immobilizing an injury using a device such as a piece of wood, cardboard, or folded blanket is called:
 - a. immobilization.
 - b. traction.
 - c. splinting.
 - d. manual stabilization.
- 3. Combative behavior, abnormal breathing patterns, and repetitive questions are all signs of a(n):
 - a. cervical-spine injury.
 - b. unresponsive person.
 - c. peripheral nervous system trauma.
 - d. Injury to the head.
- 4. The triage system was developed to assist in determining those victims needing:
 - **a.** standard care.
 - **b.** immediate transport.
 - **c.** immediate care.
 - **d.** long-term care.
- 5. Which one of the following is NOT one of the primary causes of shock?
 - a. Dilated blood vessels
 - b. Restricted movement
 - c. Severe fluid loss
 - d. Low levels of oxygen in the blood
- 6. All of the following are signs or symptoms of internal bleeding EXCEPT:

- a. increased pulse rate
- b. decreasing blood pressure
- c. decreasing pulse rate.
- d. pale skin color.
- 7. Once a seizure has ended, the patient is said to be in the _____ state.
 - a. REM
 - b. postictal
 - c. syncopal
 - d. recovery
- Your patient has been in respiratory distress for approximately 30 minutes. Your assessment reveals pale skin and cyanosis of the nail beds. These are signs of:
 - a. respiratory failure.
 - b. asthma.
 - c. hypoxia.
 - d. respiratory arrest.
- 9. The myocardium receives its blood supply from:
 - a. coronary arteries.
 - b. myocardial arteries.
 - c. the conduction pathway.
 - d. the aorta.
- 10. You have just made two attempts to ventilate an unresponsive child with an airway obstruction. Your next step is to:
 - a. begin chest compressions.
 - b. continue to ventilate.
 - c. perform five chest thrusts.
 - d. provide back slaps.