FIRST AID PROBLEM 1

May 2014



Problem 1

Problem 1

Your team has been contracted to provide mine rescue coverage for the Old Fathead Mine # 3. On a scheduled training visit your team is traveling, by rail, to the Old Fathead Mines section #2. At the intersection at the top of Fault Hill two rock dust locomotives are traveling past you down the Fault hill. You observe that the operator of the outby locomotive appears to be slumped over as they pass your location. After waiting some time the locomotive operators do not clear the block lights for Fault Hill and fail to respond to your radio calls. Your team cautiously travels down Fault Hill and finds the locomotives and rockdust tank stopped on the track at the in bottom of the hill. The outby locomotive operator is still in the operators compartment but he is now sitting up looking through his lunch box and states he's thirsty. He appears to be very confused. He takes a drink of water and attempts to move the locomotive which causes the inby locomotive operator to scream for help. You look for the inby locomotive operator and find him lying face down on the foot wall beside his locomotive. He is conscious and in pain. He states they loss control going down Fault Hill and he jumped off but he got his glove caught on the locomotive causing him to be dragged for several crosscuts. Provide care for these injured miners and transport. A bystander is available. Make the scene safe before proceeding.

OUTBY PATIENT WOUNDS

medical alert necklace – diabetic

INBY PATIENT WOUNDS

- 2 inch wound left eyelid
- fractured nose
- 2 inch wound to the chin
- fractured right pelvis
- 2 inch wound to right knee
- 6 inch wound to the outside of the right lower leg
- 2 inch wound to the right ankle
- 2 inch wound to the top of the right foot
- fractured right foot
- dislocated left shoulder
- 2 inch wound on the right elbow
- fractured right hand
- fractured right index finger

Out by patient

- breathing is 16
- radial pulse is present
- unable to follow commands. VERY CONFUSED.

INBY PATIENT

- Breathing is 28.
- Radial pulse is present.
- Able to follow commands.

Fleld lay out.

INBY Locomotive operator laying face down with glove hung on his Locomotive

ON INBY Locomotive

> Rock Dust Tank

Cocomotive

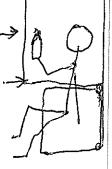
A Bottle of water

Outby Locomotive

operator sitting up

in the Locomotive

seat.



J Equipment 5

Outby Patient

INITIAL ASSESSMENT

	PROCEDURES		CRITICAL SKILL
	1. SCENE SIZE UP		*A. Observe area to ensure safety - Olsable locamolive. *B. Call for help or block from movement
ĺ	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	0	*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	0	 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.

Out by patient is Image.

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. After initially stating what DOTS stands for, the team may simply state "DOTS" when making their checks.

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

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Outby patient refuses to lay down or be placed on a backboard.

PATIENT ASSESSMENT

PROCEDURES	· r- ······						
1. HEAD		*A. *B. *C. *D. *E. *F. *G.	Tenderness and Swelling Check and touch the scalp Check the face Check the ears for bleeding or clear fluids Check the eyes for any discoloration, unequal pupils, reaction to light, foreign objects and bleeding Check the nose for any bleeding or drainage				
2. NECK	0				*A. *B.	Check the neck for DOTS Inspect for medical ID - Diabetic - Team Check chest area for DOTS	should giv
3. CHEST	3. CHEST		*A. *B. *C.	Check chest area for DOTS Feel chest for equal breathing movement on both sides Feel chest for inward movement in the rib areas during inhalations	KIICNI SUGA.		
4. ABDOMEN			.*A.	Check abdomen (stomach) for DOTS			
5. PELVIS			*A. *B.	Check pelvis for DOTS Inspect pelvis for injury by touch (Visually inspect and verbally state inspection of crotch and buttocks areas)			
6. LEGS	L ::	R	*A. B. C. *D.	Check each leg for DOTS Inspect legs for injury by touch Unresponsive: Check legs for paralysis (pinch inner side of leg on calf) Responsive: Check legs for motion; places hand on bottom of each foot and states "Can you push against my hand?" Check for medical ID bracelet			

7. ARMS	L 	R	 Check each arm for DOTS Inspect arms for injury by Unresponsive: Check arm side of wrist) Responsive: Check arms f patient; team places finger and states "Can you squee Check for medical ID braces." 	touch s for paralysis (pinch inner or motion (in a conscious rs in each hand of patient eze my fingers?"
8. BACK SURFACES		,	Check back for DOTS	

Give statement here or as soon as term gives sugar to the patient.

STATEMENT

A second first aid team has arrived to takeover care and transport this patient to the surface.

IN by Patient

INITIAL ASSESSMENT

PROCEDURES		CRITICAL SKILL
1. SCENE SIZE UP		*A. Observe area to ensure safety *B. Call for help
2. MECHANISM OF INJURY	0	*A. Determine causes of injury, if possible *B. Triage: Immediate, Delayed, Minor or Deceased. *C. Ask patient (if conscious) what happened
3. INITIAL ASSESSMENT	0	*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
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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. Inby patient is Delayed

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.

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

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,
	1	reaction to light, foreign objects and bleeding
į.		*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

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.

2. NECK				Check the neck for DOTS Inspect for medical ID
3. CHEST				Check chest area for DOTS Feel chest for equal breathing movement on both sides Feel chest for inward movement in the rib areas during inhalations
4. ABDOMEN			*A.	Check abdomen (stomach) for DOTS
5. PELVIS				Check pelvis for DOTS Inspect pelvis for injury by touch (Visually inspect and verbally state inspection of crotch and buttocks areas)
6. LEGS	L ::::::::::::::::::::::::::::::::::::	R	*A. B. C. *D.	Check each leg for DOTS Inspect legs for injury by touch Unresponsive: Check legs for paralysis (pinch inner side of leg on calf) Responsive: Check legs for motion; places hand on bottom of each foot and states "Can you push against my hand?" Check for medical ID bracelet

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

PROCEDURES		CRITICAL SKILL
1. CARE FOR		*A. Assess for distal circulation, sensation, and motor function
FRACTURE		B. Do not attempt to reduce dislocations (if applies)
		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
2. IMMOBILIZING		top of cravats (pillow should extend 6 inches beyond foot)
FRACTURE		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
1		function

]	
		A. Maintain support while splinting
		Living Splint:
		A. Immobilize the site of the injury
		B. Carefully place a pillow or folded blanket
		between the patients knees/legs
		C. Bind the legs together with wide straps or
		cravats
		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
		Padded Board Splint:
		A. Splint with two long padded splinting boards
		(one should be long enough to extend from the
		patient's armpit to beyond the foot. The other
		should extend from the groin to beyond the
E COLINE	4	foot.) (Lower leg requires boards to extend from
5. SPLINT	-	knee to below the foot.)
, and the second		B. Cushion with padding in the armpit and groin
		and all voids created at the ankle and knee
		C. Secure the splinting boards with straps and
		cravats
		D. Carefully place the 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
		Other Splints:
		A. Immobilize the site of the injury
		B. Pad as needed
		C. Secure to splint distal to proximal
		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		*A. Assess patient response and level of comfort
		*

SPLINTING (RIGID OR SOFT) PELVIC GIRDLE, THIGH, KNEE, AND LOWER LEG

PROCEDURE CRITICAL SKILL

1. DETERMINE NEED FOR SPLINTING		*A. Assess for: Pain Swelling Deformity B. Determine if splinting is warranted
2. APPLY MANUAL STABILIZATION	a	A. Support affected limb and limit movement Do not attempt to reduce dislocations
3. SELECT APPROPRIATE SPLINT		A. Select appropriate splinting method depending on position of extremity and materials available B. Select appropriate padding material
4. PREPARE FOR SPLINTING		 A. Remove or cut away clothing as needed *B. Assess distal circulation, sensation, and motor function C. Cover any open wounds with sterile dressing and bandage D. Measure splint E. Pad around splint for patient comfort

SPLINTING UPPER EXTREMITY/LOWER EXTREMITY FRACTURES (AIR SPLINT)

$\overline{}$	ROCEDURES		CRITICAL SKILL
1. 0	CARE FOR FRACTURE		*A. Assess distal circulation, sensation, and motor
1.			function(fingers/toes)
1			A. Grasp above and below the injury site
			B. Maintain support
,			C. Properly apply air splint
2. IN	MMOBILIZE		D. Splint should be relatively free of wrinkles
F	FRACTURE		E. Inflate splint to point that slight dent can be
]	1		made
	*** **********************************		*F. Reassess distal circulation, sensation, and motor
			function (fingers/toes)
		D	*A. Periodically check for increase or decrease in
		g i	pressure
3. M	ONITOR AIR-		*B. Monitor pressure in splint with finger tip
IN	IFLATED SPLINT		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).

7. ARMS	L o o	R	*A. B. C. *D.	Check each arm for DOTS Inspect arms for injury by touch Unresponsive: Check arms for paralysis (pinch inner side of wrist) Responsive: Check arms for motion (in a conscious patient; team places fingers in each hand of patient and states "Can you squeeze my fingers?" Check for medical ID bracelet
8. BACK SURFACES	D		*A.	Check back for DOTS

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	0 0	 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. 	

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 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		 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		A. Use triangle cravat or factory swatheB. Swathe is tied around chest and injured arm

ELBOW (STRAIGHT POSITION)

Follow Procedures No. 1 and No. 2 above

FINGER/FINGERS

WITH SWATHE

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

function

*C. Reassess distal circulation, sensation, and motor

SPLINTING (RIGID) UPPER EXTREMITY FRACTURES AND DISLOCATIONS

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

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function

*C. Reassess distal circulation, sensation, and motor

IMMOBILIZATION - LONG SPINE BOARD (Backboard)

PROCEDURES		CRITICAL SKILL		
			vider at the head must mmobilization of the head	
			r at the head directs the	
			rovider control movement of	
			rovider position themselves	
1. MOVE THE PATIENT	· 🖸	Upon command	of First Aid Provider at the onto side toward First Aid	
ONTO THE LONG SPINE BOARD		Providers	osterior body, if not already	
		done	poard next to the patient with	
	, ,	top of board beyo	ond top of head the board at command of the	
		First Aid Provide	r at head while holding in-line sing methods to limit spinal	
	Ö	movement Slide patient into	proper position using smooth es keeping spine in alignment	
2. PAD VOIDS BETWEEN		. Select and use ap	propriate padding	
PATIENT AND LONG SPINE BOARD		Place padding asPlace padding as	needed under the head needed under torso	
3. IMMOBILIZE BODY TO THE LONG SPINE BOARD		. Strap and secure immobilization, working toward	body to board ensuring spinal beginning at shoulder and feet	
4. IMMOBILIZE HEAD	0	Using head set o	r place rolled towels on each	
TO THE LONG SPINE BOARD		. Tape and/or stra	p head securely to board, spine immobilization	
5. REASSESS	0	A. Reassess distal ci	rculation, sensation, and	
5. REASSESS		B. Assess patient re	sponse and level of comfort	

SHOCK

PROCEDURES	CRITICAL SKILL			
CHECK FOR SIGNS AND SYMPTOMS OF SHOCK	 *A. Check for pale (or bluish) skin (in victim with dark skin examine inside of mouth and nailbeds for bluish coloration. *B. Check for cool, clammy skin *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.

Option 2: Lay the patient flat, face up. This is the supine position, used for patients with a spinal injury and patients who have serious injuries to the extremities that have not been supported. If the patient is placed in this position, you must constantly be prepared for vomiting.

Option 3: Slightly raise the head and shoulders. This position should be used only for responsive patients with no spinal injuries, life threatening chest or abdominal injuries and only for patients having difficulty breathing, but who have an open airway. A semi-seated position can also be used for patients with a history of heart problems. It is not recommended for moderate to severe cases of shock. Be certain to keep the patient's head from tilting forward.

Note: Injuries requiring the injured side to be tilted or placed down may be done after patient has been properly secured to a back board if a back board is required.