Mine Rescue

First Aid Problems

WALTER ENERGY FIRST AID PROBLEM #1

The #4 sections electrician, Jack Legg, has just returned to work after recovering from an injury he had 6 weeks ago. On his first day back he was attempting to find a bad place in the roofbolters cable and had wrapped wire around the male prongs on the 575v power plug and used his ohm meter to find an open phase lead in a splice. After repairing this bad splice and several other splices he had cut into Jack returned to the power center to turn the power on. Jack plugged the roofbolter cathead (plug) into the power center but forgot to remove the wire from around the prongs. As soon as Jack set the breaker there was a loud boom and fire shot out of the breaker causing thermal burns to Jacks face and hand. As Jack attempted to run he tripped over the other plugs on the power center and fell causing further injuries. Joe, the sections suttlecar operator, witnessed the accident and helped Jack to a safe location and gave him a gallon of water to cool his burns. Joe, who is 64 years old and has a history of heart problems and diabetes ran to the #3 face to get the section boss and then ran to the phone and called the surface for help.

When your team arrives on the scene you are told that Jack is in pain from his burns and injuries and that Joe has started complaining of chest pain, difficulty breathing, and has gotten nauseated and has vomited. Coworkers tell you that Joe is a diabetic but refuses to eat a coworker's candy bar. You can see that Joe is sitting down and has vomited on his shirt and pants and appears to be breathing shallow and fast. Jack is sitting nearby pouring water on his burns.

The scene is safe and a second backboard is on the scene and shall be used for the second patient.

JACKS WOUNDS

- **SMALL 2nd DEGREE THERMAL BURN TO THE RIGHT SIDE OF THE FACE.**
- **2nd DEGREE THERMAL BURN TO THE RIGHT HAND AND FINGERS.**
- **2" WOUND ON THE RIGHT KNEE.**
- **6" WOUND ON THE RIGHT LOWER LEG.**

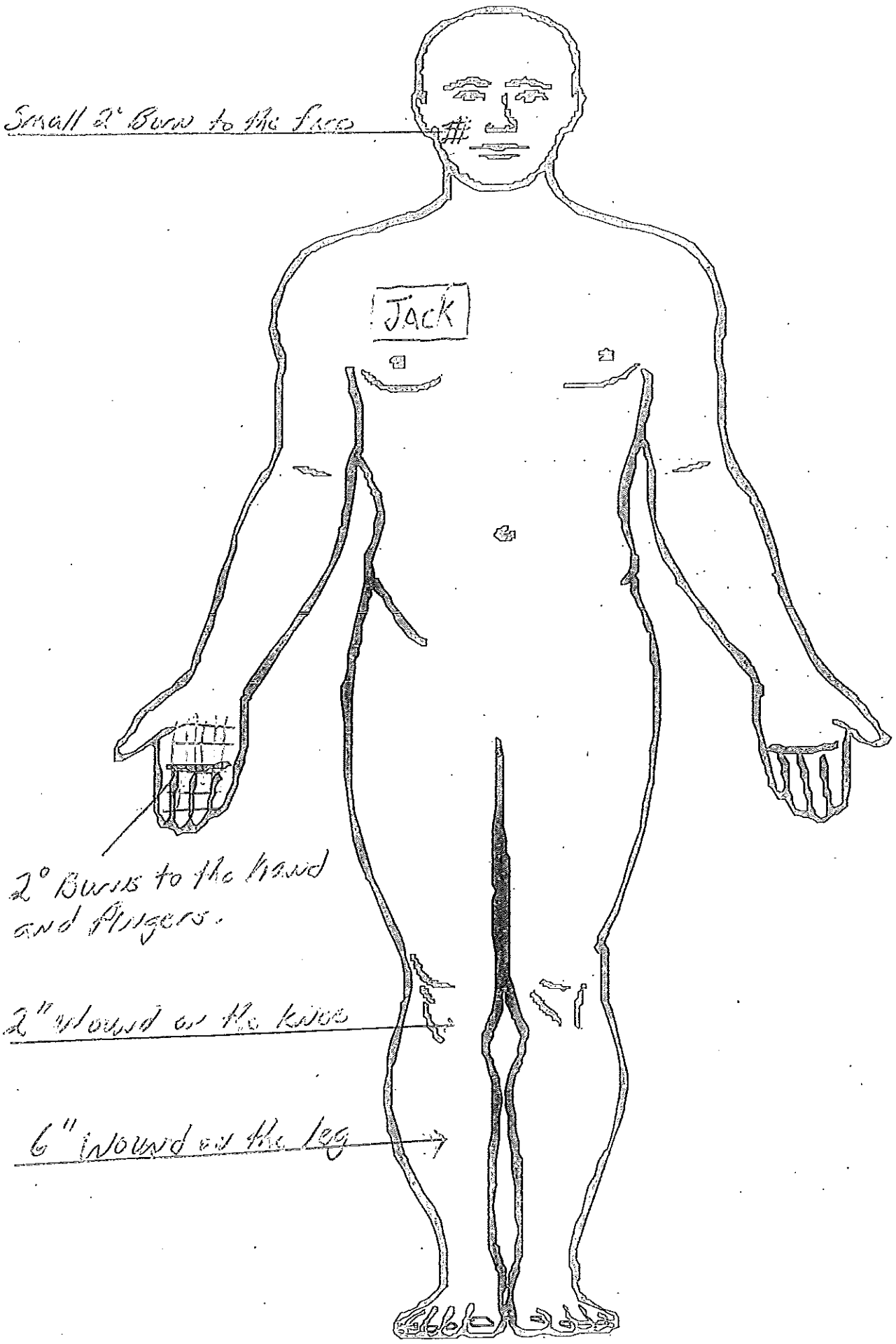
JOES WOUNDS

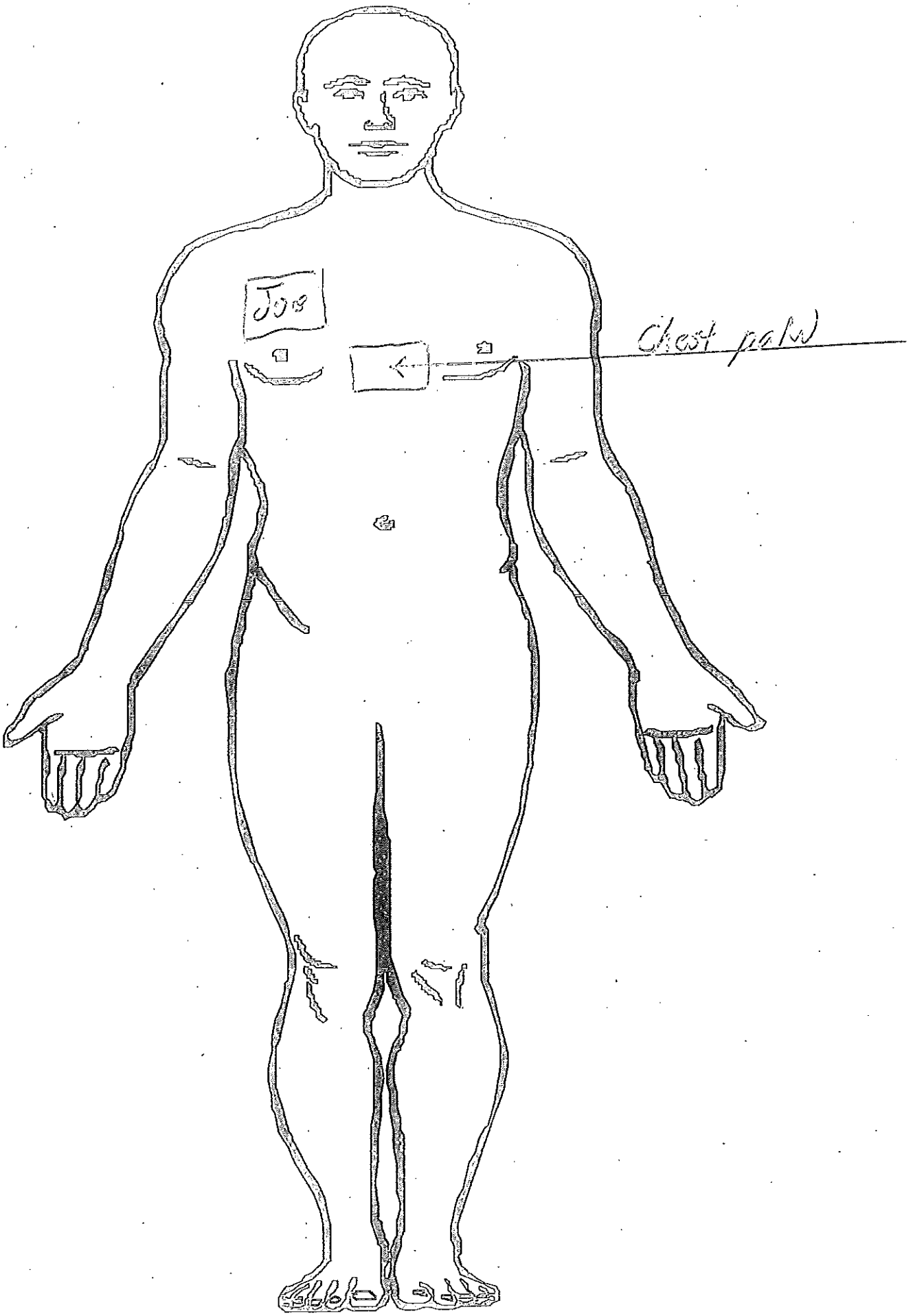
- PAIN IN HIS CHEST.

OTHER STICKER NEEDED.
NAME TAGS.

- JACK
- JOE

JACK


Small 2° burn to the face
JACK
2° Burns to the hand and fingers.
2" wound on the knee
6" wound on the leg


Chest pain

JACK

- ABLE TO FOLLOW COMMANDS.
- CAPULARY REFILL < 2.
- BREATHING < 30.

JOE

- ABLE TO FOLLOW COMMANDS.
- CAPULARY REFILL < 2.
- BREATHING IS 36 PER MINUTE.

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 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. → Joe Score card A discount #26 (-10 points)

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

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.**

PATIENT ASSESSMENT

PROCEDURES			CRITICAL SKILL
1. HEAD	☐		*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
	☐		*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 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
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)
6. LEGS	L	R	
	☐	☐	*A. Check each leg for DOTS
	☐	☐	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 DOTS 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 DOTS

IMMOBILIZATION – LONG SPINE BOARD (Backboard)

PROCEDURES		CRITICAL SKILL
1. MOVE THE PATIENT ONTO THE LONG SPINE BOARD	☐	A. One First Aid Provider at the head must maintain in-line immobilization of the head and spine
	☐	B. First Aid Provider at the head directs the movement of the patient
	☐	C. Other First Aid Provider control movement of the rest of body
	☐	D. Other First Aid Provider position themselves on same side
	☐	E. Upon command of First Aid Provider at the head, roll patient onto side toward First Aid Providers
	☐	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 First Aid Provider 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

SHOCK

PROCEDURES		CRITICAL SKILL
1. 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
	☐	*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.

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.

Joe gets Option #3

Team members should change gloves before touching Jack.

INITIAL ASSESSMENT

Score card "A" #20 -2 for each team member.

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 CIRCULATION	☐	A. Check for presence of a carotid pulse (5-10 seconds)
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	☐	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

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.

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PATIENT ASSESSMENT

PROCEDURES		CRITICAL SKILL
1. HEAD	☐	*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
	☐	*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

BURNS

PROCEDURES		CRITICAL SKILLS
1. DETERMINE BURN TYPE	☐	*A. Determine type ▫ Thermal ▫ Chemical ▫ Electrical
2. DETERMINE BODY SURFACE AREA	☐	*A. Determine Body Surface Area (BSA) using rule of nines
3. BURN CARE (All Types)	☐	*A. Remove patient from source of burn and prevent further contamination
	☐	*B. Consider the type of burn and stopping the burning process initially with water or saline if appropriate
	☐	*C. Remove jewelry
	☐	*D. Continually monitor the airway for evidence of closure
	☐	*E. Cover the burned area with a dry sterile dressing
	☐	*F. Do not use any type of ointment, lotion or antiseptic
	☐	*G. Do not break blisters
	☐	*H. Ensure patient does not get hypothermic
6. REASSESS	☐	*A. Reassess level of consciousness (AVPU), respiratory status, and patient response

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

PATIENT ASSESSMENT

PROCEDURES			CRITICAL SKILL
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
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)
6. LEGS	L	R	
	☐	☐	*A. Check each leg for DOTS
	☐	☐	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

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 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. 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.

	L	R	
7. ARMS	☐	☐	*A. Check each arm for DOTS
	☐	☐	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?"
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8. BACK SURFACES	☐		*A. Check back for DOTS

BURNS

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	☐	*C. Remove jewelry
	☐	*D. Continually monitor the airway for evidence of closure
	☐	*E. Cover the burned area with a dry sterile dressing
	☐	*F. Do not use any type of ointment, lotion or antiseptic
	☐	*G. Do not break blisters
	☐	*H. Ensure patient does not get hypothermic
6. REASSESS	☐	*A. Reassess level of consciousness (AVPU), respiratory status, and patient response

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2. TREATMENT	☐	A. Keep victim lying down
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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.

Jack gets Option #1