

SECTION VI
2021
MINE RESCUE TEAM SKILLS RULES



**2021 NATIONAL MINE RESCUE TEAM SKILLS
RULES INDEX**

Section VI

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GENERAL RULES
2021 NATIONAL MINE RESCUE TEAM SKILLS CONTESTS

Introduction

The National Mine Rescue Team Skills contest utilizes skills taken from the Nationwide Skills Rules and IG 7a. The intent is to provide competition in skills not covered in Mine Rescue contests and may or may not be compliant with IG 7a or nationwide contests.

The skills contest will consist of 4 separate events. Smoke exploration, firefighting exercises, first aid/preliminaries and a field event on the mine rescue fields. There will be isolation for the mine rescue field event and the smoke room exercise.

Mine rescue teams must be composed of persons who are bonafide employees of mining companies or persons who are designated or contracted by mining companies to fulfill the requirements of 30 CFR Part 49 mine rescue coverage.

Teams will be pre scheduled for working order and rotation between the 4 events. Teams will receive their rotation schedule when they register.

A written test for mine rescue exercise following the National Mine Rescue Rules will be given to the teams at 6:30 am to 7:00 am.

WRITTEN EXAMINATION FOR MINE RESCUE FIELD EVENT

1. During isolation, contest officials will administer a written examination to the five working team members and the briefing officer/ fresh-air base attendant of each team. The five lowest test scores will be used for the cumulative score.
2. The written examination will consist of 15 multiple choice questions taken from the review questions and glossaries that are in Modules 2 - 7 of the "draft" IG 115. Five of the 15 questions will be taken from Module 2 - Mine Gasses. The remaining 10 questions will be taken from Module 3 - Mine Ventilation; Module 4 -Exploration; Module 5 - Fires, Firefighting and Explosions; Module 6 - Rescue of Survivors and the Recovery of Bodies; and Module 7 - Mine Recovery.
3. Answers will be multiple choice with only three choices. "None of the above" will not be used as one of the choices. The answers will be verbatim from the text of the Modules referenced in Item #2 above and will not be intentionally misspelled.
4. A maximum of 20 minutes will be allowed for the team members to take the test.
5. Team members taking the written examination will not be permitted to take any written material or information into the testing area.
6. No wireless communication or electronic device, including Apple watches or similar devices, will be permitted in the testing area.
7. There will be no discussion during the time that written examinations are being taken.
8. Team members from the same team will not be permitted to sit at the same table while taking the written examination.

A reference manual written test as described in the preliminary rules will be given to the teams beginning at 6:30 am during smoke room exercise isolation.

All events will start at 8:00 am.

Teams will receive any written and verbal information concerning the events at the end of the written test.

Team Composition

- Team members cannot be substituted for the different skills events.
- Only the six working members registered by the team and the briefing officer will work on the problem.
- If a team member has a physical problem, they can be replaced by an alternate if available.

Equipment and Materials

- Teams are required to bring with them sufficient and materials to work the problem.
- Team uniforms will consist of:
 - Outer clothing will be one or two piece with long sleeves and pants, a 6 oz. minimum weight and Fire Retardant (FR) rating.
 - Standard mine hard hats and boots.
 - Fire Retardant (FR) gloves (at the fire pits)
 - Fire Retardant (FR)rated hood (at the fire pits)
- Team members are not required to have numbers on their uniforms.

Mine Rescue Field Event

The Mine Rescue Field Event will comply with the 2021 Mine Rescue Rules, including a Written Test following the National Mine Rescue Contest Rules with the following additions:

Exploration Method for Mine Rescue Exploration:

The exploration method below will be timed and observed by trained Judges who will evaluate the performance of each team. The Judge's will provide written feedback. All teams MUST USE the method described below: all other segments of the Exploration Skill will be judged and scored: Judges will review the team's compliance with the exploration procedures with the team upon completion of the Mine Rescue Field Segment.

The Mine Rescue Field exercise will be conducted using a simulated mine layout with entries and crosscuts similar to a traditional mine rescue field. Teams will be required to advance in the mine using the 2+2+1 procedure for exploring the mine. Teams must follow procedures outlined in rules when advancing in the mine.

When working in 2, 2 and 1 person groups any member can perform the duties of the Captain or other members, including the 20 minute apparatus check.

Teams are not allowed to take Skill Sheets onto the field.

Two, Two and One Exploration Procedures

Each group must have the following equipment; handheld radio, gas detector, roof sounding device and chalk.

THIS EXPLORATION METHOD MUST BE USED FOR BOTH THE MINE RESCUE FIELD SEGMENT AND THE FIRST AID SEGMENT

1. Teams may explore the areas of the mine that are smoke free in 2, 2 and 1 person groups.
2. The team Captain will decide which members are paired up in the 2, 2 and 1 person groups.
3. The 1 person must be in line of sight (in the crosscuts) of one of the 2 person groups.

4. Each member of each group can perform the duties of any team member including the Captains duties.
5. The groups will not be required to maintain a map. The Briefing Officer will maintain a map which will be scored according to 2021 NATIONAL MINE RESCUE RULES (Briefing Officer Map requirements).
6. The 2, 2 and 1 person groups must stay within one crosscut of an adjacent team when exploring.
7. An outside group will notify the center team that they have stopped or ready to advance. The center group will notify the Briefing Officer that the groups have stopped or are advancing. All other communications can be between the 3 groups and the Briefing Officer.
8. When encountered the following conditions or situations will require the 2, 2 and 1 person groups come together and function as a 5 person team
 - A. Locating a Person requiring any type of action or treatment, including providing First Aid Treatment
 - B. Entering a Refuge Alternative or Barricade (Must follow 2020 National Mine Rescue Rules)
 - C. Fire Fighting (Must follow 2020 National Mine Rescue Rules)
 - D. Ventilating the Mine (Must follow 2020 National Mine Rescue Rules)
 - E. Pumping Water (Must follow 2020 National Mine Rescue Rules)
 - F. Setting Timbers(Must follow 2020 National Mine Rescue Rules)
 - G. Traveling into or through any SMOKE (Must follow 2020 National Mine Rescue Rules)
9. If a 2, 2 and 1 person group is blocked in the entry they are exploring, they can retreat and advance up the adjacent entry to tie back into the entry they were exploring at the first accessible crosscut.
10. Failure to follow explorations procedures will result in a 2 point discount per occurrence maximum of 10 points.
11. Failure of any group to stay within 1 crosscut of an adjacent group when exploring 2 point discount per occurrence maximum of 10 points.

Anytime stretchers are transported through water they must be elevated to above the level of water.

If radios are used for communications by the team, the team must visually check the radio, before going underground for safe operating condition and level of battery charge.

SMOKE EXPLORATION RULES

- Each team must explore an area of the mine not to exceed 30 minutes.
- All mines will have the same numbers of objects or placards with information to be located by the team. Each mine may have different objects or placards in different locations.
- Teams may be required to crawl.
- The briefing officer map and team map will be scored. The 2021 National Mine Rescue Rules Map Legend will be used. The team and the briefing officer cannot visually compare their maps after explorations begin.
- Map items must be located in the general area where found. General area is defined as this: If an object or placard is on the right rib between break 1 and break 2 anywhere along the right rib in this location will be acceptable. Showing it on the opposite rib or another area will be discounted. Items located in an intersection must be mapped in the intersection.
- Teams must use approved Sound Powered Communications Systems or MSHA provided IWT Communications Radios for this exercise.

MAPS

- After the Captain starts the clock, the team will be given written instructions, and maps as follows:
 - For the smoke room event 1 map for the briefing officer and 2 maps for the team.
 - For the field event 1 map for the briefing officer and 3 maps for the groups.

- No maps are required for the fire pit events or the preliminaries.

DISCOUNTS AND REVIEW

- All events will be timed. The captain will start and stop a time clock. The team will get a 1 point discount for each minute or fraction of a minute of working time for firefighting and preliminary exercises. The mine rescue filed and smoke room exercise working time will be used for tie breaking purposes only.
- Team's total discounts will be a combination of skill sheet discounts, one discount for each minute or fraction of a minute of working time (where required) and map discounts. Skill sheet discounts will be the first tie breaker, map discounts the second and working time the third.
- Teams will be notified when they can review their score cards and maps. Teams have 30 minutes to review and must start their review within one hour after being notified.
- If a team stops the clock before the events are completed, the team will receive the applicable discounts for all parts of the problem not completed.
- Failure to follow written instructions will result in 5 discounts for each instruction.

At the beginning of the preliminary events the team will draw two team members from the five working members and briefing officer to perform the gas detector, air and pressure readings, and two man bench skills.

AIR MEASUREMENTS SKILL SHEET

- The air measurement Competition will be held with the preliminaries.
- The air direction will be provided by the judge.
- Teams will be required to provide all necessary equipment.

ANEMOMETER

- Teams will be required to take air readings with an Anemometer.
 - Failure to provide anemometer, measuring tape and timing device ____1 discount
 - Failure to give a brief description of the anemometer (how to zero and turn on the anemometer). ____1
 - Failure to take a measurement of the area to be tested. ____1
 - Failure to traverse the entry while taking a 1 minute reading in the area. ____1

The judge will give the area and velocity to the team.

- Failure to calculate correctly the air reading for the area (air reading must be calculated with pencil or pen and submitted to the Judge). No calculators will be allowed. ____1

SMOKE TUBES

- Teams will be required to take air readings with a smoke tube.
 - Failure to provide smoke tubes with aspirator bulb, measuring tape ____1
 - Failure to measure off a distant (10 foot) ____1
 - Failure of team members to verbally explain how smoke will be released and timed through each of the four quadrants. ____1
 - Failure to take measurement of area to be tested ____1

The judge will give the team the area and travel time of the smoke.

- Failure to calculate smoke air reading for the area (air reading must be calculated with pencil or pen and submitted to the judge) ____1

MAGNEHELIC

- Teams will be required to take a pressure reading with a Magnehelic.
- Failure to provide a Magnehelic and necessary port hoses and fittings. ____1
- Failure to explain what the Magnehelic is used to measure. ____1
- Failure to demonstrate how to zero the Magnehelic. ____1

For contest purposes, all returns will be low pressure and all intakes will be high pressure. Teams will be given information on their location and area to be tested.

- Failure to connect the hoses to Magnehelic properly and simulate the reading. ____1

Judge will have a preset Magnehelic properly and simulate the reading.

- Failure to give and explain the proper reading of the Magnehelic to the judge (positive or negative pressure should be included in the explanation) ____1

BREATHING APPARATUS SKILL SHEET

- The two person Breathing Apparatus Competition will be held during the preliminaries.
- Two team members will be selected from the 5 working team members and briefing officer.
- Failure to completely disassemble apparatus. ____1
- Failure to completely assemble apparatus ____1
- Failure to fill chemical cartridge during assembly ____1
- Failure to use a properly charged O2 cylinder ____1

- Team members may use the apparatus manual during testing. Failure to perform all tests required for the apparatus, this includes a face mask test. ____1
- Teams must provide all materials and equipment needed to complete this skill. ____1
- Teams will be allowed 30 minutes for this competition.
- Failure to compete will result in an additional 15 point discount. ____15

FIREFIGHTING RULES

- Teams will compete in a lance installation exercise and a hose exercise.
- Team Safety is a priority: Running will not be tolerated. The team will be given a warning by the Judge(s) if they are running. The timing device will remain running while the warning is given.

FIREFIGHTING GENERAL RULES

- Any team member between a pressurized hose and rib. ____2
- Any team member not having hold of the fire hose when in smoke. ____5
- Any team member turning their back to the fire while fighting the fire or retreating from the fire. (Defined as both feet pointed away from the fire) ____5
- Failure to have nozzle on fog pattern when advancing on the fire. (team must verbalize to Judges) ____2
- Failure to don firefighting gear when advancing on fire or installing lance. (no skin showing)
 - No FR ____2
 - No FR gloves ____2
 - No FR Hood ____2
- Failure to advance in unison when two hand lines are used. ____2
- Failure to street roll fire hose and place hose, nozzles and lance in location it was found. ____10

- Failure to roll fire hose into a tight roll with male end inside the roll. ____2
- Failure of team to install the lance before advancing on the fire. ____5
- Failure to bring an extra apparatus. ____2
- Starting and stopping the clock to avoid discounts. ____30
- Failure to verbalize checking roof and rib conditions and taking a gas test before entering the fire tunnel at both ends. ____5
- Failure to flush the Y connector prior to connecting the fire hose or flushing the fire hose prior to connecting the nozzle or lance. ____5

Firefighting Hose Management

- Failure to flush the Y connector prior to connecting the fire hose or flushing the fire hose prior to connecting the nozzle. ____2
- Any team member stepping on the pad while moving the box around the cones during the Z pattern shoot . ____2
- Any box that crosses the wrong side of a cone during the Z pattern shoot and is not returned to the correct side of the cone before proceeding to the next cone. (Team can return the cone with water pressure with no discounts or have the judge return with 2 discounts)
- Any team member stepping on or crossing the yellow mid line while the box is being moved during the goal post shoot. ____2
- If the box is moved off the pad by water pressure during the Z pattern shoot, it must be put back on the pad by use of water pressure.

Moving the box back onto the pad by any other means will constitute a 10 point discount.

Note 1: The 6 man team will work in two 3 man teams.

Note 2: If any member of the 3 person team determines the box is hung up or not spray able while on the concrete pad during the Z pattern shoot, that person must notify the judges, and the judges will return the box to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Note 3: If the box is moved off the pad adjacent to the goal posts by water pressure during the goal post shoot, it will be returned by the judges to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Note 4: If any member of the 3 person team determines the box is hung up or not spray able while on the concrete pad during the goal post shoot, that person must notify the judges, and the judges will return the box to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Gas Detectors Skill Sheet

- The Gas Test Competition will be held during the preliminaries.
- Two team members will be selected from the 5 working members and the briefing officer.
- Team members must make the following checks. 1 discount will be assessed for each check not completed.

Visual Damage	_____1 discount
Power detector up	_____1 discount
Battery Test	_____1 discount
Detector range of gases in % or PPM	_____1 discount
Calibration gas setting (set span)	_____1 discount
Alarm settings (describe how to set)	_____1 discount
Zero unit and calibrate	_____1 discount
Proper in-date cal gas and proper regulator	_____1 discount
Readings within 10% accuracy	_____1 discount
Reset peaks	_____1 discount

- Team members will perform checks and calibration as per their manual and read gas for Methane, Oxygen and Carbon Monoxide.
- Detectors will be high and low range as required by MSHA. Teams can have one detector that is high and low range or two detectors, one high and one low. Teams should use detectors that they will use in Mine Rescue work.
- Failure to have one high and low range detector or one high range detector and one low range detector_____10 discounts

Smoke Exploration Skill Sheet

- Any team member not mechanically attached to the lifeline while in smoke.
_____2
- Failure to locate objects/placards accurately
 - 2 discounts each object/placard on the team map
 - 2 discounts each object/placard on the briefing officer map
- Not following proper procedures while going under oxygen, 50 foot check or 20 minute checks.

Discounted according to 2021 National Mine Rescue Rules

- Failure to have the face piece sealed other than at the fresh air base. _____10
- Failure to systematically explore the mine intersection by intersection, including crosscuts prior to moving inby to the next intersection. _____5 each occurrence
- Failure to return immediately to the fresh air base in the event of a breathing apparatus failure. _____10
- Failure to follow written instructions _____5 each occurrence

Reference Manual Written Test

- The Reference Manual Written Test will be held at the beginning of the Smoke Competition.
- Failure to answer a question correctly. Each wrong answer. _____2
- The 5 team members and briefing officer will take a 10 question written test.
- The test will be open book and taken from the following reference books :
 - IG 115 (2020) Manual for Mine Rescue Team Training
 - IG-7a (2013)

Mine Fires Prevention-Detection-Fighting, Don Mitchell 3rd Edition.

- Teams must furnish their own reference books and electronic devices are prohibited.
- There will be a 25 minute time limit for the written test and the time taken for the test will not be added to the preliminary time.
- Teams must be isolated from each other until all tests are complete.

Mine Rescue Skills - First Aid

It is the intent of First Aid Skills Training to prepare the mine rescue team members to be able to provide first aid treatment to individuals being rescued as well as any team member who may be injured during rescue/recovery work.

The Team will explore an area of a mine complying with the 2021 National Mine Rescue Team Skills Rules and the Exploration Procedures outlined in the Mine Rescue Field Segment. The Team will find a “patient” that they must perform First Aid on following the Skill Sheets contained in this section. Upon completion of all First Aid Treatments the Team may or may not be required to reenter the mine to complete explorations.

The skill sheets used in the “Skills First Aid” may or may not include all of the assessments or treatments used when treating an injured person but should be considered the minimum standards of care to be provided by the team with the first aid materials available to them.

Materials required for First Aid Exercises:

- Materials List

12	Triangular Bandages
6	Adhesive compresses
12	Sterile gauze, (4" x 4") and/or 4" Compresses
6	Roller Bandages
2	Blankets
1	Disposable Blanket
1	Scissors, EMT Utility
6	Pairs of Examination Gloves
2	Mask/face shields or masks and goggles combination meeting blood borne pathogen requirements (mine rescue apparatus face mask suffices)
1	Compliment of splints (may be pre-padded but not assembled)
1	Long back board with straps (Aluminum, Wood, etc.)(Cravat bandages or straps cannot be preassembled on the back board)
1	Burn Sheet, Sterile (40" x 80" minimum)
1	Rigid Extrication Collar
2	Trauma Dressings (minimum of 10" x 30")
2	Tourniquets
2	Occlusive Dressing
1	Care- Vent
1	Packet sugar/tube of instant glucose (for diabetic purposes)

First Aid General Rules

Team members may have to provide first aid treatment both inby and outby the Fresh Air Base (FAB). For the skills first aid, life threatening “serious injuries” to be treated inby the fresh air base are considered to be injuries being treated while teams are under oxygen.

1. Teams must treat all life threatening “serious” injuries before transport to the fresh air base:

Serious Injuries to be treated inby the FAB will include;

- Any difficulties in breathing (opening airway, treating chest Injuries that may be causing breathing difficulties “open chest wound”, or if person is located or will be transported through an irrespirable atmosphere the person should be placed on a care-vent.
 - Open wounds that are bleeding. (No matter the severity)
- A. Open wounds with serious “life threatening” bleeding will be treated during the initial assessment after caring for breathing problems and prior to conducting the rapid assessment. (Judges must identify wounds with life threatening bleeding with a minimum of 1/4 inch letters in red ink)
 - B. Open wounds “bleeding” are to be treated prior to moving the patient.
 - C. Open wounds “no active bleeding” are not to be treated inby FAB
2. Spinal Injuries. If patient has possible spinal injuries, the team shall protect the spine by maintaining the person in an “in-line position” placing on back board and stabilizing the head and neck. (All unconscious injured patients will be considered to have possible spinal injuries)
 3. Shock – Treatment of shock will include keeping the patient warm. (Cover with blanket)
 4. Fractures- Serious Fractures that may cause additional injury if the patient is moved must be treated when found. (Judges must identify fracture as “Serious Fracture” if fracture is to be treated inby the FAB)

Wheeled stretchers can be used to carry supplies; however, patients cannot be transported on wheeled stretcher to the FAB. Patient must be transported using a back-board, basket stretcher, stokes, etc. “patient must be secured and carried to the FAB”.

5. Teams must clean all materials from the mine after completion of the problem.
6. Teams must furnish all materials from the materials list.
7. Teams must follow any written instructions given to them.
8. Protective equipment must be donned prior to patient contact (gloves and eye protection – eyeglasses are acceptable). (Apparatus face shield will be considered eye protection)
9. Teams are required to perform an Initial Assessment and rapid assessment prior to moving the patient.
10. The Captain's primary responsibility is to declare the area safe; While inby the FAB he can only verbally assist the team as they perform first aid.

Anytime stretchers are to be transported through water they must be elevated to above the level of the water

Failure to comply with the above requirements will result in a 5 point discount for each infraction

1. Judges must be very clear to the teams if an injury is serious or "life threatening".
2. Injuries will be identified by card, envelopes or labels attached to the patient at or as near the location of the injury as possible or envelopes handed to the team at a required time or location. Injury descriptions and if it is life threatening will be bold letters and at least 1/4 -inch in height.
3. Tail Captain does not have to remain stationary. He can move to assist in treatment of injuries.
4. All required first aid treatment must be scored by the attached skill sheets.
5. If CPR is part of the problem, a care-vent on a manikin must be used, contest official must provide manikin.
6. Teams are not allowed to take the Skill Sheets onto the field.
7. Persons located inby FAB with no pulse will not be treated and will be mapped as a body.

SCENE SIZE-UP

STEP	ACTION	DISCOUNT
Scene Safety	Observe the area to ensure team and patient safety *(Captain Verbalizes Area is Safe)	1
Team protection	Don protective gloves and/or any other protection if needed to protect against blood borne pathogens. (BSI)	1
Mechanism of Injury	Determine what forces caused the injury or evidence of a medical problem. If conscious - Ask patient what happened	1
Consider Spinal Injury	If the mechanism of injury indicates a possible spinal injury, or if the injured person is unconscious, team will need to maintain stabilization of the head. (In line immobilization)	1
Communication	Notify the Briefing Officer/Command Center of the location and number of patients.	1

INITIAL ASSESSMENT

Assess mental status	Determine if patient is alert and responsive or nonresponsive* *Verbally describe the level of consciousness (conscious/unconscious)	1
Assess airway-breathing	<u>Unconscious Patient</u> : Ensure airway is open by feeling air from nose or mouth or failure of chest or abdomen to rise and fall <i>If airway is not open, Correctly execute head-tilt/chin-lift or jaw thrust maneuver, depending on the presence of cervical spine (neck) injuries</i>	1
	<u>Conscious Patient</u> : Verbalize that airway has been assessed and is open. <i>Any example will be accepted: patient is talking, etc.</i> **If while assessing breathing, you identify an open chest wound, the open chest wound is to be treated at this time.	1

Assess circulation and Serious "life threatening" Bleeding	<p><u>Unconscious Patient:</u> Check carotid pulse (5 - 10 seconds) Note: If no pulse perform CPR per skill sheet (If outby FAB) <u>Conscious Patient:</u> Verbalize circulation has been assessed. <i>Team may assess pulse or provide verbal statement that patient has a pulse. Any example will be accepted: patient is talking, etc.</i></p> <p>After assuring patient is breathing and has a pulse, a rapid <u>VISUAL</u> examination will be conducted to assess for "life threatening" bleeding. The bleeding must be stopped prior to performing a Rapid Assessment <i>Judges must identify life threatening bleeding on placard (will be at least ¼ inch and in RED)</i></p>	1
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RAPID ASSESSMENT/FINAL ASSESSMENT

A Rapid Patient Assessment will be performed after the initial assessment has been performed and before the patient is transported to the FAB. This assessment is to locate any additional injuries. All life threatening "serious" injuries must be treated prior to moving patient, (See rule No. 1) All other injuries (non-life threats) are to be treated at the FAB. *Complete assessment of patient to be conducted prior to moving patient.*

STEP	ACTION	DISCOUNT
Examine for all injuries.	Check Head	1
	Check Neck	1
Identify and treat life threatening Injuries as they are found	Check Chest	1
	Check Abdomen	1
	Check Pelvis	1
	Check Legs	1
	Check Arms	1
Verbalize each area examined	Check Back Surface	1

SUCKING CHEST WOUND

STEP	ACTION	DISCOUNT
Expose wound	Expose entire wound	1
Seal wound and control bleeding	Apply direct pressure "gloved hand" as needed to stop the bleeding	1
Apply an occlusive dressing	Place occlusive dressing over wound Ensure dressing is large enough not to be sucked into the wound	1
	Seal on three sides - Affix dressing with tape	1
Monitor Patient	"Monitor patient closely for increasing difficulty breathing" if breathing becomes difficult "shallow or rapid" release dressing and have patient exhale - reseal (<i>Team Verbalizes this will be done</i>)	1
	Place the patient on the injured side to allow expansion room for the uninjured lung if there is no spinal injury or other injuries would prohibit	1
Transport	Transport to fresh air base as soon as possible	1

LIFE THREATENING BLEEDING

External

STEP	ACTION	DISCOUNT
Direct pressure	Takes appropriate body substance isolation	1
	Cover wound with a clean cloth or your gloved hand and apply direct pressure on the wound <i>If controlled, bandage dressing in place, if not controlled continue skill</i>	1
<u>NOTE:</u> If not controlled, Judge must now inform the person that the wound continues to bleed		
Elevation	If wound is on an arm or leg and there is no fracture, elevate extremity above heart level as you apply pressure unless spine injury is suspected.	1
<u>NOTE:</u> If not controlled, Judge must now inform the person that the wound continues to bleed		

Tourniquets	<p>Apply between the wound and the heart as close to the wound as possible (Approximately 1 inch above the wound) but never over a joint. Tighten till bleeding is controlled. Do not loosen. Make note of time applied. Mark T or TK on forehead.</p> <p><u>Improvised Tourniquet:</u> Apply a bandage around the extremity above the wound (one inch above but not on a joint) and tie a half knot in the bandage. Place a stick or pencil on top of the knot and tie the ends of the bandage over the stick in a square knot. Twist the stick until the bleeding is controlled, secure the stick in position.</p> <p><u>Factory Tourniquet:</u> Apply per manufacturer recommendation above the wound (one inch above but not on a joint)</p>	1
Shock	Verbally state that person will be treated for shock (refer to shock skill sheet)	

LIFE THREATENING BLEEDING

Internal

STEP	ACTION	DISCOUNT
Examination	Monitor breathing and pulse	1
Treatment	Keep patient still Loosen restrictive clothing Nothing by mouth Treat for shock (Refer to shock skill sheet)	1 1 1 1
Transport	Transport to fresh air base as soon as possible	1

SHOCK

STEP	ACTION	DISCOUNT
Assess for Shock	Assess for shock and verbally state treatment for shock	1
Treatment	Keep victim lying down	1
	Cover with blanket to prevent loss of body heat	1
	Elevate according to injury <i>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 and/or placed on a spinal board. Remember to consider the mechanism of injury for every patient.</i> <i>Do not elevate feet if you are treating a person with: head injury, heart attack, stroke, or chest injuries</i>	1
	If possible-Reassure and calm the patient (Team verbalizes this will be done)	1

OPEN WOUNDS

STEP	ACTION	DISCOUNT
Control Bleeding	Use direct pressure to control bleeding	1
Dressing	Apply sterile dressing over entire wound	1
	Do not remove dressing, if bleeding continues apply additional dressings directly over first dressing	1
Bandaging	Cover all edges of dressing (dressings completely covered)	1
	Do not bandage too tightly.	1
	Do not bandage too loosely.	1
	Do not cover tips of fingers and toes, unless they are injured.	1
Embedded objects	Do not remove embedded objects unless obstructing airway.	1
	Stabilize with a bulky dressing	1
	If object is too large to transport, cut off only enough to allow for transportation	1
	Check for exit wound	1

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

BURNS

STEP	ACTION	DISCOUNT
Type of Burn	Determine Type of Burn - Thermal, Electrical, Chemical	1
Burn Care (All Types)	Keep site clean and keep the patient warm	1
	Separate Sites - burned areas that might come in contact with each other when bandaging	1
	Remove jewelry	1
	Apply moist dressings to first and second degree burns. Dry dressings to third degree burns	1
	Do not apply ointment, sprays, butter or ice to burned areas	1
	Do not break blisters	1
Chemical burns	Brush off dry powders	1
	Consider flushing with large amounts of water	1
Electrical burns	Ensure safety before removing patient from the electrical source	1
	Look for both an entrance and exit wound	1
	Monitor the patient closely for respiratory and cardiac arrest	1

FRACTURES

STEP	ACTION	DISCOUNT
Assess Injured Area	Examine possible injured site for signs and symptoms of fracture:	1
	Assess for circulation and movement below the fractured site	1

Immobilize suspected fracture	Splint in position found - Do not attempt to straighten any painful, swollen, deformed extremity.	1
	Provide manual immobilization - immobilize the limb and apply splint	1
	Check that splints are long enough to support joints above and below suspected fracture	1
	Pad improvised splints to ensure even contact and pressure between the limb and the splint.	1
	Secure fractured area to splint by applying bandaging material above and below the fractured site	1
	Secure all splinted/fractured limbs for transport	1
	Re-Assess for circulation and movement below the fractured site	1

RIB FRACTURE

STEP	ACTION	DISCOUNT
Assess Patient for Possible rib fracture	Assess for severe pain with each breath	1
	Tenderness over fracture	1
	Deformity at site of fracture	1
	Inability to take a deep breath	1
Treatment	Apply thick padding over injured ribs	1
	Apply two medium cravat bandages around the chest firmly enough to afford support centering the cravats on either side of the injury	1
	Support the arm on the injured side in a sling	1

SKULL OR SPINAL FRACTURE

STEP	ACTION	DISCOUNT
Assessment	Determine if patient is to be treated for possible skull or spinal injuries; This includes: All unconscious patients Deformity of the skull Open Wound - Clear fluid coming from ears and/or nose Pupils may be unequal in size; impaired vision Partial or complete paralysis	1

Treatment	Manually stabilize the head until patient is secured to your backboard	1
	Use modified jaw thrust to open airway if the airway is compromised	1
	Apply cervical collar.	1
Transport	Position patient on backboard (Refer to log roll skill sheet)	1
	Secure patient to backboard <i>The patient must have his head, arms, pelvic area, upper legs and both legs below the knees secured to the stretcher. Straps or cravats must be used.</i> Note: Patient MUST be secured to back board to prevent movement during transport. If patient is allowed to move/slide/etc. on back board during transport discount for endangering patient. <i>Example: If during transport the backboard is tilted and the patient slides on back board.</i>	1
	Use blanket roll, padding, rolled up coats, etc. to stabilize the head and neck	1
	Treat for shock (use shock skill sheet)	1

FOUR MAN LOG ROLL

STEP	ACTION	DISCOUNT
Prepare for the Roll	Stabilize the neck and head and open airway by modified jaw-thrust	1
	Place spine board parallel to the patient	1
	Position one person at the shoulder, one at waist and one at the knee	1
	Shoulder rescuer extends patient's arm over the head on the side the patient will be rolled	1
	Rescuers will place hands under patient's shoulder, upper arm, waist, buttocks, knees and mid-calf	1
Roll	Roll patient in unison on side toward the rescuers	1
	Waist rescuer pulls spine board against patient	1
	On command roll patient as a unit onto board	1

CARE-VENT - Manual ventilation and cardiac compressions

STEP	ACTION	DISCOUNT
Preparing Patient	Allow the device to cycle once and then apply the full face mask or attach the Care Vent DRA to the patient's full face mask. A tilt action is used to hyper-extend the neck and move the jaw forward. This helps displace the tongue away from the back of the throat and maintain an open airway.	1
	If the patient's chest does not rise or the gas escapes around the mask or the pressure relief system operator, reposition the patient's head and adjust your hand position to obtain an effective mask and an open airway.	1
	If mask indicates signs of vomit, remove immediately and clear the airway. Ensure the mask and valve is free from obstruction. Restart ventilation immediately after cleaning airway.	1
Ventilation	If manual ventilation is to be used, depress the manual button and observe the rise of the patient's chest. Release the button when the chest rise is adequate.	1
Evaluation	If no respiratory effort is observed, position yourself above the patient's head. Turn on the gas supply.	1
	Monitor the patient's skin, nail bed and lip color.	1

CARE-VENT - Automatic ventilation

STEP	ACTION	DISCOUNT
Preparing Patient	Allow the device to cycle once and then apply the full face mask or attach the Care Vent DRA to patient's full face mask. A tilt action is used to hyper extend the neck and move the jaw forward. This helps displace the tongue away from the back of the throat and maintains an open airway.	1
Ventilation	Continue ventilation at an appropriate rate until relieved or spontaneous breathing returns.	1
	If mask indicates signs of vomit, remove immediately and clear the airway. Ensure the mask and valve is free from obstruction. Restart ventilation immediately after cleaning airway.	1
Evaluation	If no respiratory effort is observed, position yourself above the patient's head. Turn on the gas.	1

CPR

STEP	ACTION	DISCOUNT
Establish Unresponsiveness	Tap or gently shake shoulders "Are you OK?" *	1
Determine Patient is not breathing	Determine unconsciousness without compromising possible cervical spine (neck) injury	1
	Look , listen, feel for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate	1
Start Chest Compressions	Locate the compression point on the breastbone between the nipples	1
Start Chest Compressions	Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel	1
Start Chest Compressions Ventilations Between Compressions	Do not intentionally rest fingers on the chest	1
	Keep heel of your hand on chest during and between compressions	1
	Give 30 compressions	1
	Compressions are at the rate of 100 – 120 per minute (30 compressions delivered within 18 seconds)	1
	Compression depth. 2 – 2.4 inched for an adult	1

Ventilations Between Compressions	Correctly execute head-tilt/ chin-lift or jaw thrust maneuver depending on the presence of cervical spine injuries	1
Ventilations Between Compressions	Place barrier device (pocket mask/ shield with one way valve/ Care-Vent) on manikin	1
Continue Chest Compressions	Give 2 breaths 1 second each	1
	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.)	1
	Provide 5 cycles of 30 chest compressions and 2 rescue breaths	1
	To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR	1
Continue Chest Compressions	If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set	1
Continue Chest Compressions	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)	1