



**U.S. Department of Labor and  
Holmes Mine Rescue Association**

**2017 Coal National Mine  
Rescue Contest  
Beaver, WV**

**Mine Safety and Health  
Administration**

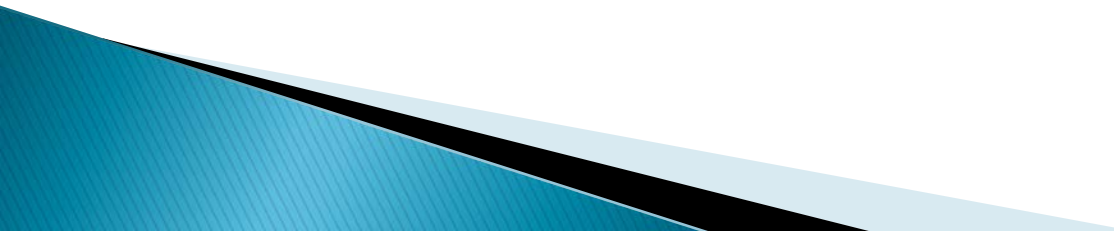
# **RULES GOVERNING THE 2017 NATIONAL FIRST AID CONTEST**

As of 3/14/2017

- ▶ **20167 FIRST AID CONTEST RULES**
- ▶ **INDEX**
- ▶ Section II
- ▶ Title Page
- ▶ Rules Governing the 20167 First Aid Contest ... 1
- ▶ Scorecard A Discounts .....8
- ▶ Interpretations of Scorecard B (Artificial Ventilation/Cardiopulmonary Resuscitation)..... 12

▶ Skill Sheets	
▶ Initial Assessment .....	1516
▶ Patient Assessment .....	1617
▶ <del>Automated External Defibrillator .....</del>	<del>19</del>
▶ One-Person CPR (Manikin Only) .....	1819
▶ Two-Rescuer CPR (Manikin Only) .....	2021
▶ Mouth-to-Mask Resuscitation .....	2427
▶ Airway Obstruction .....	2528
▶ Sucking Chest Wound .....	2730
▶ Life Threatening Bleeding.....	2831
▶ Tourniquet.....	2932
▶ Dressings and Bandaging – Open Wounds .....	3033

▶ Two–Person Log Roll .....	3235
▶ Splinting .....	3336
▶ One Rescuer Blanket Drag .....	4144
▶ Ground Lifts .....	4245
▶ Shirt Drag .....	4346
▶ Establishing Airway – Suspected Cervical Spine (Neck) Injury.....	4447
▶ Shock .....	4548
▶ Immobilization .....	4649
▶ Burns .....	4851
▶ Frostbite .....	4952
▶ Late or Deep Cold Injury .....	5053
▶ Hyperthermia .....	5154
▶ First Aid Statements of Fact .....	5356
▶ First Aid Statements of Fact – Answer Key .....	7075

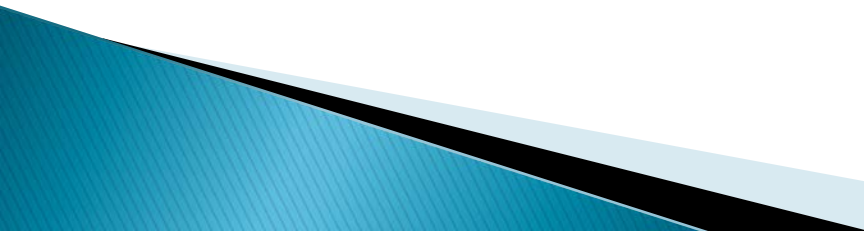
- ▶ First Aid rules were designed as a training tool for first aid teams. They were developed for contest purposes only. **Discretion should be used in actual mine emergency situations.**
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# Rules

- ▶ 1. Members of First Aid Teams must be bona fide employees of the mining industry. Teams shall furnish their own recording manikin, and all other materials listed in C Miscellaneous.
- ▶ 2. A team shall consist of two members and a patient. A team shall not use the same patient for multiple teams. Bystander(s) may only assist in supporting, lifting, or moving the patient. If the problem requires a bystander(s), they will be provided. Bystander(s) will be positioned at the field and will be identified as a bystander with labels or name tags and Body Substance Isolation BSI precautions will be in place. If a patient is used as a bystander teams must provide BSI precautions prior to patient contact. Each team shall work one first aid problem and the score shall determine the team's final standings.



# Rules

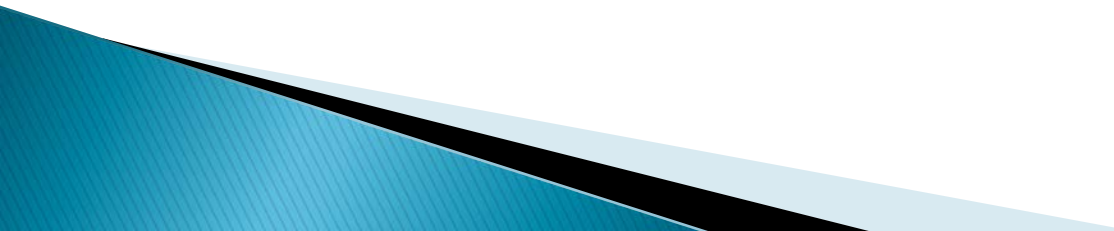
- ▶ **3.** Each team entering the contest will draw a number to determine the order of the performance at the time of registration.
  - ▶ **4.** Each participating team must be under guard before the start of the contest. Any team or team member receiving information concerning a contest problem prior to arriving at the working area will, be disqualified by the Chief Judge and Director.
  - ▶ **5.** No practicing will be allowed on the field before the beginning of the Contest. No reference books or training material will be permitted in the working area during the working or reading of the problems.
  - ▶ **6.** Only designated officials will be allowed to communicate with teams while teams are working.
- 



# Rules

- ▶ 7. All Procedures shall be performed in the order listed: Skill sheets supersede First Aid Rules which supersede Brady First Responder ninth Edition by Bergeron and Le Baudour.
- ▶ 8. Contest officials will designate a space (15 feet by 15 feet - minimum) for teams to work. All equipment **and team members** will be kept behind a baseline designated by a Contest Official. All problems will be worked in the designated area which shall contain only the judges, bystanders/patients and the contesting teams. **Team members not complying with this rule will be docked under Rule 18 on Scorecard A**
- ▶ 9. The Timekeepers shall explain to the team the timing devices used. Judges will require a signature and team number on the sample CPR tape. (Check shallow breaths and shallow compressions).

# Rules

- ▶ **10.** Problems will be kept in unsealed envelopes, retained by the judges, and given to the team after the timing device has been started. Judges shall place the patient in the required position as stated in the problem to be worked.
    - A. the working time for a problem will start when the team starts the timing device.
- 

# Rules

- ▶ 10 B. if props are to be utilized during the working of the problem, such props must be readily available to the working teams and in working condition. These props must be identified by the judges to the team members prior to starting the timing device and must be located within the designated working area. Props will not be utilized in lieu of first aid equipment for treatment of patient(s). Props will be limited to items related to communication and mechanism of injury for effects unless skill sheets are provided. Props shall be within the application of the skill sheets used for treatment of the injury/condition.
- ▶ A barrier device must be used when contacting manikin. The face masks/shields may be removed when the team is required to give artificial ventilation, CPR, inflating splints, etc.

# Rules

- ▶ **11.** Injuries/conditions requiring treatment will be identified by cards, envelopes or labels attached to the patient at or as near the location of the injury as possible on the outside of the clothing, be identified by simulated wounds, or be in the reading of the problem. Signs, symptoms or mechanisms of injury may be used. If signs and symptoms are used, all signs and symptoms shall be identified by cards, envelopes or labels placed on the patient. All signs and symptoms will be given to the teams in writing. Wounds that are listed in the reading of the problem shall be placed on patient (Exception: If the wound is on the eyelid or an impaled object in the eye, the label will NOT be placed on the eye, but in an obvious area near the eye.)

# Rules

- ▶ During the initial or patient assessment, teams may find an envelope attached to the patient(s) or be provided an envelope by the judges which contain patient information that needs immediate attention. If repositioning of patient(s) is required for treatment, patient(s) must be placed in the proper position prior to treatment. Upon completion of treatment of these conditions, the initial or patient assessment will be resumed at the point where the team left off. The patient(s) will already be marked upon arrival of the team.

# Rules

- ▶ **12.** Lettering on the cards and/or labels will be at least  $\frac{1}{4}$  inch in height.

- Example: **2-INCH WOUND ON FOREHEAD**

**13.** The problem will end and teams will stop the timing device when all conditions have been located, treated, and work area has been cleared. The timekeeper/judge must time the problem in minutes and seconds and consult with the team upon completion of the problem to verify the time.

# Rules

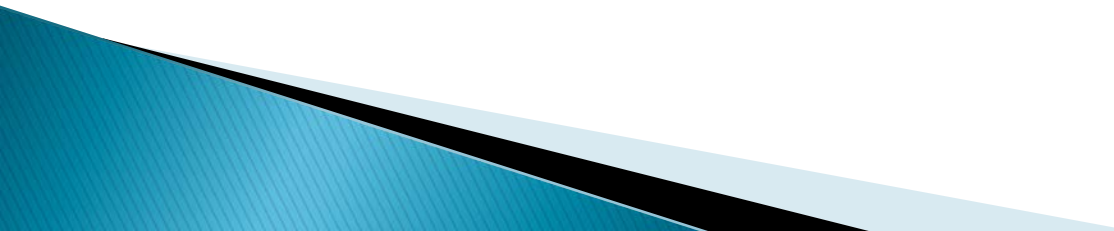
- ▶ **14.** After stopping the timing device, team members will remain with the patient(s) until released by the judges. Any physical treatment(s) not performed, i.e. bandage, splint will be pointed out to team at this time.
- ▶ **15.** The calculated time will be determined by Contest Officials by averaging the working time of all teams participating in the Contest (1 discount per 3 minute overtime or fraction thereof).
- ▶ **16.** The accumulation of individual discounts within a procedure shall not exceed the discounts for failure to perform that procedure. (Example AV, CPR, etc.)



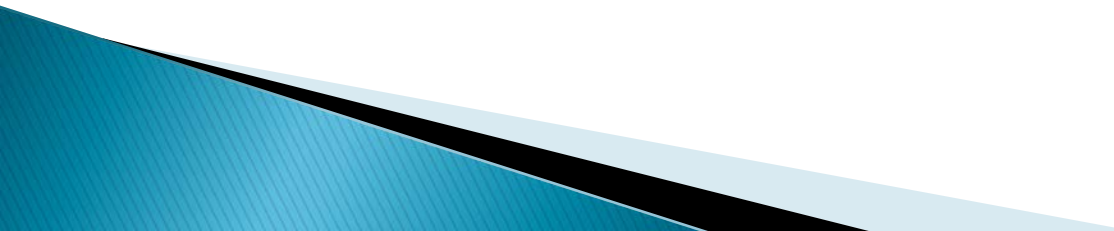
# Rules: Written Examination

- ▶ 1. During isolation, contest officials will give the written exam to the two working team members. The written examination will be ten statements of fact taken verbatim from the contest rules. The answers will be multiple choice with four choices. Team members will select A, B, C, or D by circling the complete answer.
- ▶ Example:
- ▶ 1. As a member of the EMS team, your primary role is one of:
  - a. Patient care.
  - **b. Safety.**
  - c. Transport.
  - d. Documentation.
- ▶ A maximum of fifteen minutes will be allowed for the team members to take the test.

# Rules: Written Examination

- ▶ **2.** Team members taking the written examination will not be permitted to take any written material or information into the testing area.
  - ▶ **3.** There will be no discussion during the time that written examinations are being taken.
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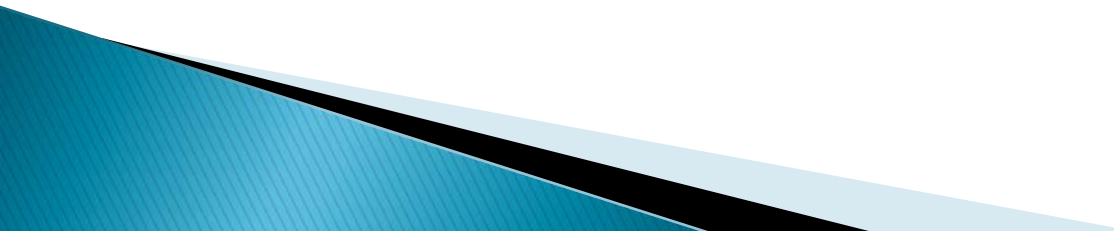
# Rules: Ties

- ▶ In the event of ties in the contest, Scorecard A (First Aid Procedures and Critical Skills) discounts will be the first tie breaker, Scorecard B (AV/CPR) discounts will be the second tie breaker, written exam will be the third tie breaker and actual working time, in minutes and seconds, of the team will be the fourth tie breaker.
- 

# Rules

- ▶ Teams will be notified by posting when they may review their score cards. Within one hour of posting, team members and trainer shall report to a designated location. Once notified, team members and the trainer shall have 20 minutes for reviewing the problem, the judge's skill sheets and scorecards to prepare any protest. All protests shall be in writing and shall state the discount in question, the scorecard involved, and their reference proof in the rule book or Brady book to support their protest or the protest will not be considered. All protests will be considered by the Final Appeals Committee. A decision by the Final Appeals Committee is binding and final. Protest sheets will be furnished to the teams by the Judges for the recording of rules infractions or discounts assessed to teams. Judges shall remain available until released.

# Rules: Materials List

- ▶ Participants will be required to furnish their own materials. Teams must provide the minimum equipment. Listed below is the minimum equipment required. Problems will be designed utilizing no more than the minimum material list. For contest purposes, all bandaging materials will be considered sterile.
- 

# Materials List

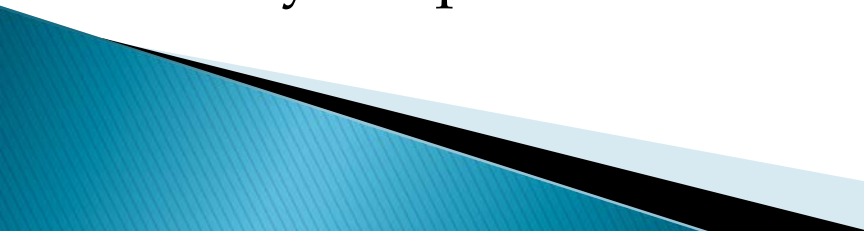
- ▶ 24 Triangular Bandages
- ▶ 6 Adhesive compresses
- ▶ 24 Sterile gauze, (4"x4") and/or 4" Compresses
- ▶ 6 Roller Bandages
- ▶ 3 Blankets
- ▶ 1 Scissors, EMT Utility
- ▶ 6 Pairs of Examination Gloves
- ▶ 2 Mask/face shields or masks and goggles combination meeting blood borne pathogen requirements
- ▶ 2 Heat Pack - Simulated
- ▶ 4 Cold packs - Simulated
- ▶ 2 Oval Eye Pads
- ▶ 1 Pen and paper set
- ▶ 1 Elevating device
- ▶ 1 Recording manikin
- ▶ 2 Barrier devices with one-way valve for performing AV/CPR
- ▶ 1 White bag (i.e. plastic garbage bag)
- ▶ 1 Compliment of splints (may be pre-padded but not assembled)
- ▶ 1 Long back board with straps (Aluminum, Wood, etc.)
- ▶ 2 Air splints (1 full arm and 1 full leg)
- ▶ 1 Packet Sugar/Tube Instant Glucose (for Diabetic Purposes)
- ▶ 1 Adhesive Tape
- ▶ 1 Burn Sheet, Sterile (40" x 80" minimum)
- ▶ 1 Rigid Extrication Collar
- ▶ 4 Trauma Dressings (minimum of 10" X 30") 1 Eye Shield/Cup
- ▶ 1 Pen Light
- ▶ 4 Tourniquets
- ▶ 2 Towels
- ▶ 1 Pillow
- ▶ 4 Occlusive Dressing
- ▶ 2 Sticks, Wooden Dowels or equivalent
- ▶ 1 Watch/Timing Device
- ▶ 1 Headset (long spine board)
- ▶ 1 500 ml sterile water
- ▶ Compliment of Straps for Long Spine Board
- ▶ Automated External Defibrillator Training Unit

# Rules

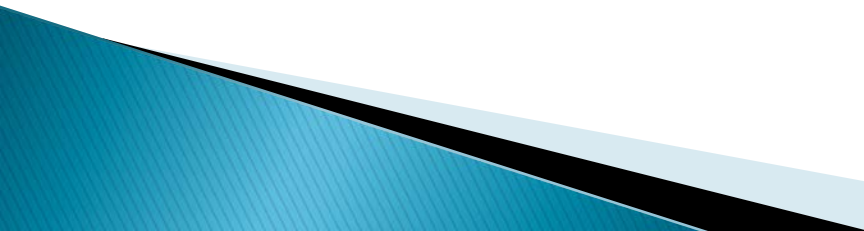
- ▶ Problem will be designed from the Skill Sheets approved by the Rules Committee.
- ▶ Teams will be required to triage the accident scene. Problem may have up to three patients at the scene.
- ▶ Manikins will be furnished by teams for performing procedures and critical skills pertaining to all ventilation problems, cardiac arrest problems. Signal boxes on manikins will be covered or positioned so that indicators will not be visible to the team.  
NOTE: Live patients will **not** be used in any CPR or ventilation problems.
- ▶ Under no circumstances will videotape recordings or photos be introduced as supplementary material for consideration of the appeal.



# Guidelines for Skills Sheet Discounts

- ▶ 1. The team is required to call for help/call 911, once during the working of the problem. This statement must be made prior to starting triage.
  - ▶ 2. Each critical skill identified with an asterisk (\*) shall be clearly verbalized by the team as it is being conducted.
  - ▶ 3. After initially stating what DOTS stands for; Deformities, Open Wounds, Tenderness, and Swelling, the team may simply state "DOTS" when making their checks.
  - ▶ 4. After initially stating what CSM stands for; Circulation, Sensation and Motor Function, the team may simply state "CSM" when making their checks.
- 

# Guidelines for Skills Sheet Discounts

- ▶ 5. After initially stating what AVPU stands for; Alert, Verbal, Painful, Unresponsive, the team may simply state “AVPU” when making their checks.
  - ▶ 6. If an injury requires a back board, the team may continue to the next area to be treated once all injuries not requiring the backboard have been treated or treatment started.
  - ▶ 7. The collar for a skull fracture and/or brain injuries, will be applied after the neck has been examined and treatment completed if required.
- 

# Guidelines for Skills Sheet Discounts

- ▶ **8.** Except for slings required for treatment for fractures or dislocation, slings may be applied anytime during the working of the problem prior to stopping clock. (This includes slings for fractured ribs). Factory or Triangular slings may be used. No sling required when using a full arm splint, arm should be secured to the body.
- ▶ **9.** For injuries requiring splinting, any acceptable splint may be used. Factory splints, wooden splints, air splints, sam splints, etc.
- ▶ **10.** Prior to stopping the clock, the team must reassess the patient's level of consciousness, respiratory status and patient response.

# Guidelines for Skills Sheet Discounts

- ▶ **11.** Teams must make statement to judge, “Removing clothing; exposing and cleaning wound surface(s)”. This statement is only required to be made once during the working of the problem, prior to treating first wound.
- 12.** Rapid Assessment consists of Initial Assessment and Patient Assessment.
- 13.** If the Rapid Assessment has been performed, all life threatening injuries are treated, and transportation is delayed the detailed patient assessment will be performed and will consist only of the procedures (no critical skills on patient assessment) with treating all injuries when found.

## Table 26.2 – Start Triage System

Table Reference: Emergency Medical Responder, ninth edition by Le Baudour and Bergeron

	<b>IMMEDIATE</b>	<b>DELAYED</b>	<b>MINOR</b>	<b>DECEASED</b>
<b>Respirations</b>	<b>&gt;30 per minute</b>	<b>&lt;30 per minute</b>	<b>&lt;30 per minute</b>	<b>Absent</b>
<b>Perfusion</b>	<b>Capillary refill &gt;2 seconds or radial pulse absent</b>	<b>Capillary refill &lt;2 seconds or radial pulse present</b>	<b>Capillary refill &lt;2 seconds or radial pulse present</b>	<b>Absent</b>
<b>Mental Status</b>	<b>Unable to follow commands</b>	<b>Able to follow commands</b>	<b>Able to follow commands</b>	<b>Absent</b>

# Scorecard A Discounts

- ▶ 1. Violations of general rules not covered on scorecards. \_\_\_\_5 each infraction
- ▶ 2. All life-threatening conditions shall be located and started before patient assessment can begin. \_\_\_\_20
- ▶ Life threatening conditions will be considered a patient having any one or more of the following conditions: breathing difficulties, no pulse, spinal injury, skull fracture, a sucking chest wound or life threatening bleeding)
- ▶ Patient assessment can begin after all life-threatening conditions have been located and treatment started. Environmental and Medical Emergencies can be treated anytime during the working of the problem after initial assessment.

# Scorecard A Discounts

- ▶ **3.** When the team encounters life-threatening bleeding, no work other than controlling bleeding shall be done until bleeding is controlled. Bleeding is controlled when notified by the Judge (judge makes a statement that bleeding is controlled). If treatment has been started and one team member can complete that treatment, the other team member may continue to work. \_\_\_\_10 each infraction
- ▶ **4.** During the course of the problem, teams may encounter a card, envelope or label stating various conditions. Upon completion of treatment of these conditions, resume patient assessment at the point where team left off. \_\_\_\_5 each infraction



# Scorecard A Discounts

- ▶ 5. Patient cannot talk, direct, or assist unless stated in the problem. (Reactionary or unintentional movements by the patient should not be discounted) \_\_\_\_5 each infraction
- ▶ 6. The bystander/patient must be shown the correct method of support. \_\_\_\_2
- ▶ The bystander must be shown the correct method of support and maintaining the open airway by a team member or members any time during the working of the problem, but before taking support.

# Scorecard A Discounts

- ▶ 7. No practicing will be allowed on the field before the beginning of the Contest. No reference books or training material will be permitted in the working area during the working or reading of the problems. \_\_\_\_5
- ▶ 8. All team members and patient shall be dressed similarly. Shoes need not be identical. The patient may wear shorts even if the team members are wearing pants. The pants and shorts shall be the same color. \_\_\_\_1

# Scorecard A Discounts

- ▶ **9.** The team's material and equipment (jump kits, splints, etc.) may not be assembled or donned (excluding BSI) until after the timing device is started. The manikin may be placed in the designated area prior to starting the timing device. \_\_\_\_5
- ▶ **10.** Handling of a patient by a team or team member in such a manner that could compromise condition of the patient. (Examples: Mishandling extremities, stepping across patient, etc.) (Straddling is only acceptable for patient loading.) \_\_\_\_5 each infraction
- ▶ **11.** All injuries and/or conditions shall be treated (example: wound, fracture, frostbite). \_\_\_\_20 each infraction
- ▶ **12.** Preassembly of material. \_\_\_\_5

# Scorecard A Discounts

- ▶ **13.** Failure to perform a required critical skill. Each CRITICAL SKILL shall be performed as identified on the skill sheets. \_\_\_\_2 each infraction
- ▶ **14.** During patient assessment, failure to verbally state the location physically examined and each condition found. \_\_\_\_1 each infraction
- ▶ **15.** Working out of order (assessment, procedure, critical skill). \_\_\_\_2

## Delayed

- ▶ Teams will systematically conduct the patient assessment according to procedures of the patient assessment skill sheet. Each area of the body shall be examined in its entirety prior to treating injuries in that area (except taking support). All injuries must be treated on the area being examined prior to moving to the next area to be examined. The sling for fractured ribs may be applied after upper extremity has been surveyed/treated. If treatment has been started and can be completed by one team member (except injuries requiring a backboard), the other team member may continue the examination to the next area and begin treatment. (Systemically, legs are treated before the arms.)

## Immediate

- ▶ Teams will systematically conduct initial assessment, treating all life-threatening injuries/conditions. When one or more of the conditions listed in rule 26 is encountered the team will perform a rapid patient assessment according to the patient assessment skill sheet. To perform a rapid patient assessment, teams will examine each area of the body in its entirety, verbalizing critical skills and injuries/conditions found. No treatment is required for non-life-threatening conditions/injuries found during the rapid patient assessment.

- ▶ After completing rapid assessment and treating life threatening conditions, if transportation is delayed patient treatment will continue until transportation is available. A detailed patient assessment would be required, treating conditions/injuries as found. Straps may be released as necessary. Support would have to be taken as required. Team will re-strap and transport when transportation is available or treatment completed. Patient is then prepared for transport and/or transported as required by written protocol. To prepare for transportation, a team will be required to properly place and secure a patient on a backboard as outlined in the skill sheets, cover with a blanket and lift patient from the floor. After the patient has been lifted from the floor, the team will verbalize – “transporting patient”.

# Scorecard A Discounts

- ▶ **16.** Failure to follow written instructions. \_\_\_\_5
- ▶ **17.** Teams shall not pad around the head and neck of the patient, for a suspected spinal injury, before the patient is placed onto the backboard. \_\_\_\_1
- ▶ **18.** All material shall be placed behind baseline prior to stopping the timing device. After completing the problem the work area shall be cleaned of ALL material, including the infectious waste, which shall be placed in a white trash bag provided by the team. When all materials have been placed behind baseline, a team member shall stop the timing device. The judges and First Aid team will verify the working time upon completion of the problem. \_\_\_\_1



# Scorecard A Discounts

- ▶ **19.** Protective equipment must be donned prior to patient(s) contact (gloves, masks, and eye protection - eyeglasses are acceptable). Only BSI may be donned prior to starting the timing device. \_\_\_\_5 each infraction
- ▶ **20.** Gloves shall be changed if there would be contamination because of a glove tear or due to other contamination (such as contacting multiple patients.) \_\_\_\_2 each infraction
- ▶ **21.** The broken-back board splint may be preassembled and padded. Other splints may be pre-padded but not assembled. (Cravat bandages cannot be preassembled on the back board, except for tying padding.) \_\_\_\_5

# Scorecard A Discounts

- ▶ **22.** Failure to take support of a fracture or dislocation (not supporting fracture or dislocation).\_\_\_\_\_10
- ▶ Support of Extremities – Above and below the fracture or dislocation
- ▶ Support of Hip – Both sides of the fracture or dislocation
- ▶ Support for spinal injury – Stabilization of neck/Modified Jaw Thrust **except for analyzing and shocking with AED patient during CPR**
- ▶ Support for skull fracture – Stabilization of neck/Modified Jaw Thrust
- ▶ No support for fractured ribs,
- ▶ No support of fractures/ dislocations of nose, jaw, fingers, and toes

# Scorecard A Discounts

- ▶ **23.** Support of fractures and/or dislocations shall not be broken or released. \_\_\_\_5
- ▶ When changing support, if support is broken, this discount applies. Change of support can be done as many times as the team desires provided the support is not broken.
- ▶ Support for upper extremity fractures/dislocations shall be maintained until the sling and swathe are completed. Discount if support of fracture and/or dislocation is released by support person before sling is completed.
- ▶ Sling and swathe not required with air splints.

# Scorecard A Discounts

- ▶ **24.** Fractures/dislocations shall be supported prior to bandaging injuries. Once the extremity has been assessed, fractures/dislocations must be supported prior to bandaging injuries on the extremity. \_\_\_\_5
- ▶ During initial and patient assessment, teams must physically support/stabilize fractures and dislocations that require support as they are found. When the fracture/dislocation is on an extremity and support has been taken, the team must complete the examination on the extremity treating other injuries prior to splinting the fracture/dislocation.

# Scorecard A Discounts

- ▶ **25.** Not applying sling for upper extremity wound. \_\_\_\_1
- ▶ Triangular slings are required for all wounds of upper extremities, including shoulder and armpit wounds. Slings will not be required for upper extremity burns/deep cold injuries. However, if a burn/deep cold injury and wound and/or fracture/dislocation are present on the same upper extremity, a sling shall be applied.

# Scorecard A Discounts

- ▶ **26.** Failure to determine immediate patients. \_\_\_\_10
- ▶ An immediate patient shall be transported immediately (**if transportation is available**). This presents a load and go situation.
- ▶ Immediate conditions are:
  - Respirations: >30 respirations per minute
  - Perfusion: Capillary refill >2 seconds or radial pulse absent
  - Mental Status: Unable to follow commands. Any one or more of the above conditions must be clearly visible on the patients.

# Scorecard A Discounts

- ▶ **27.** Failure to start timing device. \_\_\_\_ 2 discounts
- ▶ **28.** Each incorrect answer on written examination \_\_\_\_1 discount

# Interpretations of Scorecard B

- ▶ 1. Failure to determine unresponsiveness (according to Critical Skill Sheet). \_\_\_\_1
- ▶ 2. Failure to call for help. \_\_\_\_1
- ▶ 3. Failure to open airway. \_\_\_\_1
- ▶ 4. Failure to use proper maneuver to open airway (using head-tilt/chin-lift maneuver when jaw-thrust should be used, vice versa). \_\_\_\_1
- ▶ 5. Failure to assess breathlessness within 10 seconds. \_\_\_\_1
- ▶ 6. Failure to use one-way valve barrier device when ventilating manikin. \_\_\_\_1
- ▶ 7. Failure to state “get AED”. \_\_\_\_1



# Interpretations of Scorecard B

- ▶ **8.** Failure to use mouth-to-nose ventilation when required. \_\_\_\_1
- ▶ **9.** Failure to keep body and head in line, if spinal injury exists. \_\_\_\_1
- ▶ **10.** Failure to use tongue jaw lift, cross-finger technique, or finger sweep when required. \_\_\_\_1
- ▶ **11.** Failure to reposition head when airway obstruction is suspected. \_\_\_\_1
- ▶ **12.** Failure to give chest compressions when required. (airway obstruction skill sheet) \_\_\_\_1
- ▶ **13.** Failure to check pulse prior to giving compressions. \_\_\_\_1
- ▶ **14.** Failure to assess pulse for 5-10 seconds. \_\_\_\_1

# Interpretations of Scorecard B

- ▶ **15.** Failure to correctly locate the carotid pulse. \_\_\_\_1
- ▶ **16.** Failure to verbalize absence of pulse. \_\_\_\_1

# Cardiopulmonary Resuscitation

- ▶ 1. Failure to give AV/CPR when required. \_\_\_\_20
- ▶ (Maximum of 3 sets AV/CPR or combination thereof)
- ▶ 2. Failure to locate landmark for giving compressions. \_\_\_\_1
- ▶ 3. Failure to make parallel axis with heels of hands. \_\_\_\_1
- ▶ 4. Allowing fingers to rest on chest. \_\_\_\_1

# Cardiopulmonary Resuscitation

- ▶ 5. Compressions. Discounts shall apply to each set.
- ▶ a) Timing. 30 compressions shall be delivered within 18 seconds. \_\_\_\_1
- ▶ b) Depth. Compression depth shall break the first line for 60 pounds pressure. Over compressions shall not be discounted. \_\_\_\_1
- ▶ c) Number required. A total of 30 compressions shall be made each cycle. \_\_\_\_1
- ▶ d) Release of upstroke. The release line shall be straight. \_\_\_\_1
- ▶ e) Rate. Compressions shall be made at the rate of ~~(at least)~~ 100 to 120 per minute. \_\_\_\_1

# Cardiopulmonary Resuscitation

- ▶ 6. Failure to maintain hand contact with manikin when releasing pressure during compressions. \_\_\_\_1 (This does not apply between cycles).
- ▶ 7. Failure to give 2 breaths between each cycle of compressions. \_\_\_\_1
  - ▶ a. Timing (not completing breaths and returning 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
  - ▶ b. Volume shall be at least .8 liters (through .7 liter line on new manikins). Over inflation shall not be discounted. \_\_\_\_1

# Cardiopulmonary Resuscitation

- ▶ **8.** Failure to give 5 cycles of 30 compressions and 2 breaths for each set of CPR (point of first down stroke to peak of last breath). (A cycle is 30 compressions and two (2) ventilations. A set is 5 cycles.) \_\_\_\_1
- ▶ **9.** Failure to assess pulse within 10 seconds after each set of CPR. \_\_\_\_1 (one discount per set)
- ▶ **10.** Failure to give 30 chest compressions when airway obstruction is suspected. \_\_\_\_1
- ▶ **11.** Failure to perform CPR as stated in the problem. Too many or too few compressions can be detrimental to patient. \_\_\_\_1

# Cardiopulmonary Resuscitation

- ▶ **12.** Failure for the number of Rescuer/Rescuers to perform CPR as stated in the problem. Team performing One-Person CPR when Two-Person CPR is required and vice versa. \_\_\_\_3  
(When problem states “Two-Rescuer CPR”, two people are required to perform CPR as listed in Two-Rescuer CPR skill sheets.)
- ▶ **13.** Failure to begin with compressions after pulse check is completed or when changing rescuers. \_\_\_\_1
- ▶ **14.** Failure to apply the AED when available \_\_\_\_10
- ▶ **15.** Failure of rescuers to change positions in 5 seconds or less when performing two-person CPR. \_\_\_\_1
- ▶ **16.** Failure of rescuer to state that patient has a pulse when CPR is completed. \_\_\_\_1

# Artificial Ventilation

- ▶ 1. Failure to give artificial ventilation. \_\_\_\_20
- ▶ (Maximum of 3 sets AV/CPR or combination thereof)
- ▶ 2. Failure to give 10-12 breaths in each 58-62-second period. \_\_\_\_1 (1 minute of AV = 1 set)
- ▶ 3. Failure to provide a breath volume of at least .8 liters (through .7 liter line on new manikins). Over inflation shall not be discounted. \_\_\_\_1
- ▶ 4. Failure of rescuer to check for return of breathing and pulse when artificial ventilation is completed. \_\_\_\_1
- ▶ 5. Failure of rescuer to state that patient is breathing and has a pulse when artificial ventilation is completed. \_\_\_\_1



# AUTOMATED EXTERNAL DEFIBRILLATOR

PROCEDURES		CRITICAL SKILL
1. RESCUER 1—ESTABLISH UNRESPONSIVENESS	<ul style="list-style-type: none"> <li>☐</li> <li>☐</li> <li>☐</li> <li>☐</li> <li>☐</li> </ul>	<ul style="list-style-type: none"> <li>☐ A. Tap or gently shake shoulders</li> <li>☐ *B. "Are you OK?"</li> <li>☐ C. Determine unconsciousness without compromising cervical spine (neck) injury</li> <li>☐ *D. "Call for help"</li> <li>☐ *E. "Get AED" (Note: If AED is used, follow local protocol)</li> </ul>
2. RESCUER 1—MONITOR PATIENT FOR BREATHING	<ul style="list-style-type: none"> <li>☐</li> </ul>	<ul style="list-style-type: none"> <li>☐ A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)</li> </ul>
3. RESCUER 1—CHECK FOR CAROTID PULSE	<ul style="list-style-type: none"> <li>☐</li> <li>☐</li> <li>☐</li> </ul>	<ul style="list-style-type: none"> <li>☐ 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</li> <li>☐ B. Check for presence of carotid pulse for 5 to 10 seconds</li> <li>☐ *C. Absence of pulse</li> </ul>

# AUTOMATED EXTERNAL DEFIBRILLATOR

PROCEDURES		CRITICAL SKILL
4. GIVES HIGH-QUALITY CPR	<ul style="list-style-type: none"> <li>⊖</li> <li>⊖</li> <li>⊖</li> <li>⊖</li> <li>⊖</li> </ul>	<ul style="list-style-type: none"> <li>⊖ A. Correct compression hand placement</li> <li>⊖ B. Adequate Rate: At least 100/min. (i.e., delivers each set of 30 chest compressions in 18 seconds or less)</li> <li>⊖ C. Adequate Depth: Delivers compressions at least 2 inches in depth (at least 23 out of 30)</li> <li>⊖ D. Allows complete chest recoil (at least 23 out of 30)</li> <li>⊖ E. Minimizes interruptions: Gives 2 breaths with pocket mask in less than 10 seconds</li> </ul>
5. SECOND RESCUER ARRIVES WITH AED (DURING FIFTH SET OF COMPRESSIONS)		<ul style="list-style-type: none"> <li>A. First rescuer continues compressions while second rescuer turn on AED and applies pads</li> <li>B. RESCUERS SWITCH First rescuer clears victim, allowing AED to analyze (Judges shall provide an envelope indicating a shockable or non-shockable rhythm)</li> <li>C. If AED indicates a shockable rhythm, first rescuer clears victim and delivers shock.</li> </ul>
6. RESUME HIGH QUALITY CPR		<ul style="list-style-type: none"> <li>A. Second rescuer gives 30 compressions immediately after shock delivery (2 cycles)</li> <li>B. First rescuer successfully delivers 2 breaths</li> </ul>

# One Person CPR (Manikin Only)

PROCEDURES		CRITICAL SKILL
1. RESCUER 1- ESTABLISH UNRESPONSIVENESS		<ul style="list-style-type: none"> <li>A. Tap or gently shake shoulders</li> <li>B. * “Are you OK?”</li> <li>C. Determine unconsciousness without compromising cervical spine (neck) injury</li> <li>D. * “Call for help”</li> <li>E. * “Get AED” (Note: If AED is used, follow local protocol)</li> </ul>
2. RESCUER 1- MONITOR PATIENT FOR BREATHING		<ul style="list-style-type: none"> <li>A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)</li> </ul>
3. RESCUER 1- CHECK FOR CAROTID PULSE		<ul style="list-style-type: none"> <li>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</li> <li>B. Check for presence of carotid pulse for 5 to 10 seconds</li> <li>C. * Absence of pulse</li> <li>D. * <b>Immediately start CPR if no pulse</b></li> </ul>
4. POSITION FOR COMPRESSIONS		<ul style="list-style-type: none"> <li>A. Locate the compression point on the breastbone between the nipples</li> <li>B. Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel</li> <li>C. Do not intentionally rest fingers on the chest</li> <li>D. Keep heel of your hand on chest during and between compressions</li> </ul>

# One Person CPR (Manikin Only)

PROCEDURES		CRITICAL SKILL
5.DELIVER CARDIAC COMPRESSION		<ul style="list-style-type: none"> <li>A. Give 30 Compressions</li> <li>B. Compressions are at the rate of at least 100 per minute (30 compressions delivered within 18 seconds)</li> <li>C. Down stroke for compression must be on or through compression line</li> <li>D. Return to baseline on upstroke of compression</li> </ul>
6. ESTABLISH AIRWAY		<ul style="list-style-type: none"> <li>A. Kneel at the patient's side near the head</li> <li>B. Correctly execute head-tilt/chin-lift or jaw thrust maneuver depending on the presence of cervical spine injuries</li> </ul>
7. VENTILATIONS BETWEEN COMPRESSIONS		<ul style="list-style-type: none"> <li>A. Place barrier device (pocket mask/shield with one-way valve) on manikin</li> <li>B. Give 2 breaths 1 second each</li> <li>C. Each breath - minimum of .8 (through .7 liter line on new manikins)</li> <li>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)</li> </ul>

# One Person CPR (Manikin Only)

PROCEDURES		CRITICAL SKILL
8. CONTINUE CPR FOR TIME STATED IN PROBLEM		<ul style="list-style-type: none"><li>A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths</li><li>B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR</li><li>C. Rescuer opens airway and checks for adequate breathing or coughing</li><li>D. Rescuer checks for a carotid pulse</li><li>E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set</li><li>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)</li></ul>
9. CHECK FOR RETURN OF PULSE		<ul style="list-style-type: none"><li>A. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds)</li><li>B. * "Patient has a pulse"</li></ul>

# Two-Rescuer CPR **with AED** (No Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
1. RESCUER 1- ESTABLISH UNRESPONSIVENESS		<ul style="list-style-type: none"> <li>A. Tap or gently shake shoulders</li> <li>B. * "Are you OK?"</li> <li>C. Determine unconsciousness without compromising cervical spine (neck) injury</li> <li>D. * "Call for help"</li> <li>E. * "Get AED" (Rescuer 2 gets AED) (Note:If AED is used, follow local protocol)</li> </ul>
2. RESCUER 1- MONITOR PATIENT FOR BREATHING		<ul style="list-style-type: none"> <li>A. Look for absence of breathing (no chest rise and fall) or gasping breaths, which are not considered adequate (within 10 seconds)</li> </ul>
3. RESCUER 1- CHECK FOR CAROTID PULSE		<ul style="list-style-type: none"> <li><del>E</del>.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</li> <li><del>D</del>.B. Check for presence of carotid pulse for 5 to 10 Seconds</li> <li>*<del>E</del>.*C. Absence of pulse</li> <li>*<del>F</del>.*D. Immediately starts CPR if no pulse</li> </ul>

# Two-Rescuer CPR with AED (No Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
4. RESCUER 2- POSITION FOR COMPRESSIONS		<ul style="list-style-type: none"><li>A. Locate the compression point on the breastbone between the nipples</li><li>B. Place heel of one hand on the compression point and the other hand on top of the first so hands are parallel</li><li>C. Do not intentionally rest fingers on the chest. Keep heel of your hand on chest during and between compressions</li></ul>
5. RESCUER 2- DELIVER CARDIAC COMPRESSION		<ul style="list-style-type: none"><li>A. Give 30 compressions</li><li>B. Compressions are at the rate of <del>at least</del> 100 to 120 per minute (30 compressions delivered within 18 seconds)</li><li>C. Down stroke for compression must be on or through compression line</li><li>D. Return to baseline on upstroke of compression</li></ul>
6. RESCUER 1- ESTABLISH AIRWAY		<ul style="list-style-type: none"><li>A. Kneel at the patient's side near the head</li><li>B. Correctly execute head-tilt/chin lift maneuver</li></ul>

# Two-Rescuer CPR with AED (No Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
7. RESCUER 1- VENTILATIONS BETWEEN COMPRESSIONS		<ul style="list-style-type: none"> <li>A. Place barrier device (pocket mask/shield with one-way valve) on manikin</li> <li>B. Give 2 breaths 1 second each</li> <li>C. Each breath - minimum of .8 (through .7 liter line on new manikins)</li> <li>D. Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle.)</li> </ul>
8. CONTINUE CPR FOR TIME STATED IN PROBLEM		<ul style="list-style-type: none"> <li>A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths</li> <li>B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR</li> <li>C. Rescuer at patient's head maintains airway and checks for adequate breathing or coughing</li> <li>D. The rescuer at the patient's head shall feel for a carotid pulse</li> <li>E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set</li> <li>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)</li> </ul>



## Two-Rescuer CPR **with AED** (No Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
9. First Rescuer applies the AED (DURING FIFTH SET OF COMPRESSIONS)		<p>A. Second rescuer continues compressions while First rescuer turns on AED and applies pads</p> <p>B. RESCUERS SWITCH- First rescuer clears victim, allowing AED to analyze. (Judges shall provide an envelope indicating a shockable or non-shockable rhythm)</p> <p>C. If AED indicates a shockable rhythm, first rescuer clears victim again and delivers shock.</p>
10. RESUME HIGH QUALITY CPR		<p>A. First rescuer gives 30 compressions immediately after shock delivery (2 cycles)</p> <p>B. First rescuer successfully delivers 2 breaths</p>
11. CHANGING RESCUERS		<p>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.</p>
12. CHECK FOR RETURN OF PULSE		<p><del>B.</del>A. After providing required CPR (outlined in problem), check for return of pulse (within 10 seconds)</p> <p>*A.*B. "Patient has a pulse."</p>

## Two-Rescuer CPR **With AED** (With Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
1. RESCUER 1- ESTABLISH UNRESPONSIVENESS		<ul style="list-style-type: none"> <li>A. Tap or gently shake shoulders</li> <li>B. * "Are you OK?"</li> <li>C. Determine unconsciousness without compromising cervical spine (neck) injury</li> <li>D. * "Call for help"</li> <li>E. * "Get AED" " (Rescuer 2 gets AED) (Note: if AED is used, follow local protocol)</li> </ul>
2. RESCUER 1- MONITOR PATIENT FOR BREATHING		<ul style="list-style-type: none"> <li>A. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds)</li> </ul>
3. RESCUER 1- CHECK FOR CAROTID PULSE		<ul style="list-style-type: none"> <li>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</li> <li>B. Check for presence of carotid pulse for 5 to 10 seconds</li> <li>C. * Absence of pulse</li> </ul>

## Two-Rescuer CPR **With AED** (With Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
4. RESCUER 1- POSITION FOR COMPRESSIONS		<ul style="list-style-type: none"><li>A. Locate the compression point on the breastbone between the nipples</li><li>B. Place heel of one hand on the compression point and the other hand on top of the first so hands are parallel</li><li>C. Do not intentionally rest fingers on the chest. Keep heel of your hand on chest during and between compressions</li></ul>
5. RESCUER 1- DELIVER CARDIAC COMPRESSION		<ul style="list-style-type: none"><li>A. Give 30 compressions</li><li>B. Compressions are at the rate of <b>at least</b> 100 <b>to</b> 120 per minute (30 compressions delivered within 18 seconds)</li><li>C. Down stroke for compression must be on or through compression line</li><li>D. Return to baseline on upstroke of compression</li></ul>
6. RESCUER 2- ESTABLISH AIRWAY		<ul style="list-style-type: none"><li>A. Kneel at patient's head</li><li>B. Correctly execute jaw thrust maneuver</li></ul>

## Two-Rescuer CPR **With AED** (With Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
7. RESCUER 2- VENTILATIONS BETWEEN COMPRESSIONS		<ul style="list-style-type: none"> <li>A. Rescuer 1 should place the barrier device (pocket mask/shield with one-way valve) on manikin (OPTION 1: When spinal injury is present, Rescuer No. 2 can hold barrier device on manikin after Rescuer No. 1 correctly places device over the mouth and nose) (OPTION 2: Rescuer 1 can place the device on the manikin each time patient is ventilated)</li> <li>B. Give 2 breaths 1 second each</li> <li>C. Each breath - minimum of .8 (through .7 liter line on new manikins)</li> <li>D. Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle.)</li> </ul>
8. CONTINUE CPR FOR TIME STATED IN PROBLEM		<ul style="list-style-type: none"> <li>A. Provide 5 cycles of 30 chest compressions and 2 rescue breaths</li> <li>B. To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR</li> <li>C. Rescuer at patient's head maintains airway and checks for adequate breathing or coughing</li> <li>D. The rescuer at the patient's head shall feel for a carotid pulse</li> <li>E. If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set</li> <li>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)</li> </ul>

## Two-Rescuer CPR With AED (With Spinal Injury- Manikin Only)

PROCEDURES		CRITICAL SKILL
9. First Rescuer applies the AED (DURING FIFTH SET OF COMPRESSIONS)		<ul style="list-style-type: none"> <li>A. First rescuer continues compressions while second rescuer turns on AED and applies pads</li> <li>B. RESCUERS SWITCH- First rescuer clears victim, allowing AED to analyze. (Judges shall provide an envelope indicating a shockable or non-shockable rhythm)</li> <li>C. If AED indicates a shockable rhythm, first rescuer clears victim again and delivers shock.</li> </ul>
10. RESUME HIGH QUALITY CPR		<ul style="list-style-type: none"> <li>A. Second rescuer gives 30 compressions immediately after shock delivery (2 cycles)</li> <li>B. First rescuer successfully delivers 2 breaths</li> </ul>
11. CHANGING RESCUERS		<ul style="list-style-type: none"> <li>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.</li> </ul>
12. CHECK FOR RETURN OF PULSE		<ul style="list-style-type: none"> <li>A. A final pulse check will be required at the end of the last set of CPR (within 10 seconds)</li> <li>B. * "Patient has a pulse."</li> </ul>

# Mouth-To-Mask Resuscitation

PROCEDURES		CRITICAL SKILL
1. ESTABLISH UNRESPONSIVENESS		<ul style="list-style-type: none"> <li>A. Tap or gently shake shoulders</li> <li>B. * "Are you OK?"</li> <li>C. Determine unconsciousness without compromising cervical spine (neck) injury</li> <li>D. * "Call for help"</li> <li>E. * "Get AED" (Note: if AED is used, follow local protocol)</li> </ul>
2. MONITOR PATIENT FOR BREATHING		<ul style="list-style-type: none"> <li>A. Look for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate (within 10 seconds)</li> </ul>
3. CHECK FOR CAROTID PULSE		<ul style="list-style-type: none"> <li>A. Correctly locate the carotid pulse (on the side of the rescuer)</li> <li>B. Check for presence of carotid pulse within 10 seconds</li> <li>*B.*C. Presence of pulse</li> </ul>
4. ESTABLISH AIRWAY		<ul style="list-style-type: none"> <li>A. Correctly execute head-tilt/chin lift or jaw thrust maneuver depending on the presence of cervical spine (neck) injuries</li> </ul>

# Mouth-To-Mask Resuscitation

PROCEDURES		CRITICAL SKILL
5. VENTILATE PATIENT		<ul style="list-style-type: none"><li>A. Place barrier device (pocket mask/shield with one-way valve) on manikin</li><li>B. Ventilate patient 10 to 12 times per minute. Each ventilation will be provided at a minimum of .8 (through .7 liter line on new manikins)</li></ul>
6. CHECK FOR RETURN OF BREATHING AND PULSE		<ul style="list-style-type: none"><li>A. After providing the required number of breaths (outlined in problem), check for return of breathing and carotid pulse within 10 seconds</li><li>B. * "Patient is breathing and has a pulse"</li></ul>