

NORTH CENTRAL REGIONAL First Aid Contest for Surface and Open Pit Mines, Quarries Mills and Plants

PREFACE

This document provides instructions, rules, and procedures for the North Central Regional First Aid Contests for Surface and Open Pit Mines, Quarries, Mills and Plants. Reference to specific brands, equipment, or trade names in this document is made to facilitate understanding and does not imply endorsement by the Mine Safety and Health Administration.

MISSION STATEMENT

First aid contests serve as a training tool to help first aid team members improve the skills required to respond successfully to an actual first aid emergency. Contests overcome the difficult challenge of motivating first responders to train unceasingly and maintain peak readiness for an event everyone hopes and strives to insure never happens. A first aid contest takes first aid training out of the realm of the hypothetical, and gives first responders a tangible goal to train for. And when first aid team members train for a first aid contest, they are *honing skills, increasing knowledge, building confidence, and strengthening proficiencies* that would be put to the ultimate test if and when they are called upon to respond to an actual first aid emergency.

1. GENERAL RULES, TEAM REQUIREMENTS, REGISTRATION, TEAM SUPPLIES

1.1 Contest officials will comprise the following: Chief Judge, Contest Director, Contest Coordinator, Appeals Committee, field judges, written exam judges, injury "victims," and isolation officials.

1.2. The number of teams admitted from any company or organization may be limited by the contest director based on the size and capacity of the facility where the contest is held, and/or the availability of sufficient contest officials. The goal will be to provide an opportunity for as many companies, organizations, and teams to compete as possible, based on available resources. There will be a \$0.00 entry fee for each team entered.

1.3. Team registration forms should be submitted at least thirty (30) days prior to the date of the contest, however, every effort will be made to accommodate late registrations. Teams are asked to contact the contest director if they wish to register for the contest within thirty (30) days of the date of the contest. Registration forms and

instructions will be provided to any company, organization, or team upon written request to:

William Pomroy, Contest Director
MSHA
North Central District Office
515 W. First Street
Duluth, Minnesota 55802-1302

or, by contacting William Pomroy electronically at the following e-mail address:

POMROY.WILLIAM@DOL.GOV

or, by calling William Pomroy at 218-720-5448.

1.4. Team check-in will be conducted between 6:00 a.m. and 6:30 a.m. on the day of the contest at the contest venue.

1.5. Each first aid team will consist of two members. The team members will take the written examination as separate individuals, but will collaborate and perform together as a team to work the "hands on" first aid problems. At its discretion, a team may, but is not required to designate a third person to be an alternate team member. If a team member is unable to compete in the contest, the alternate team member may substitute for the team member unable to compete. Substitutions will be allowed up to the time of the written examination on the day of the contest. Once the written examination has started, no further team member substitutions will be permitted. The alternate team member will be allowed to take the written examination as a practice exercise; however, the alternate team member's written examination score will not be included in the team's official score.

1.6. First aid team members and alternates must be employed by the production mine operator or contractor that entered the team in the contest.

1.7. Each first aid team must furnish the basic first aid supplies needed to work the "hands on" first aid problems unless notified by the contest director in advance that certain designated supplies will be provided and available at a specific contest station.

At the CPR/artificial respiration station, the only items a team will need to provide are CPR barrier devices for each team member, such as pocket face masks or face shields.

A list of suggested first aid supplies and equipment that teams should bring with them for the patient assessment/treatment/transport station(s) is attached to these rules.

Teams are advised that the amounts and selection of first aid supplies and equipment included on this list should be regarded as minimums, and that at their discretion, they may choose to expand on this listing.

1.8. All materials belonging to a team and brought to a contest station, whether used to solve a first aid problem or not, must be picked up by the team prior to moving on to their next station.

1.9. Cardiopulmonary resuscitation (CPR) will only be performed on a mannequin.

1.10. Any violations of the general rules not covered in the discount sheets will result in ten (10) discounts for each infraction.

1.11. Each team member must wear an approved protective helmet (hard hat), safety shoes, and safety glasses.

2. ISOLATION

2.1. After arriving at the contest venue and checking in with contest officials, all first aid team members and alternates will report to isolation, bringing with them all of the first aid supplies, materials, and equipment (trauma bag, splints, BSI, blankets, etc.) they will use during the contest.

NOTE: If insufficient space is available in isolation for teams to bring their first aid supplies, materials and equipment with them, the contest director will designate a secure location where teams will cache these items until their team is called out of isolation to work the "hands on" problems.

2.2 At 6:30 AM, all teams must be in isolation. At that time, the contest director will provide a briefing to introduce contest officials, outline contest logistics, and make any last minutes announcements. Following the team briefing, teams will draw numbers out of a hat to determine team starting positions. The team draw for starting positions may be modified as necessary to enable 2 teams from the same mine to share equipment and supplies (i.e. to insure both teams from the same mine won't be working the patient assessment/treatment/transport stations at the same time).

2.3. Following the draw for starting positions, the teams that draw starting positions 1, 2, and 3 will start the "hands on" first aid problems, while the remaining teams will stay in isolation where the written examination will be administered. (More information on the written examination is provided below in section 4.). When the teams that drew starting positions 1, 2 and 3 have finished the "hands on" first aid problems, they will go to a separate isolation room designated by the contest director to take the written examination.

2.4. Team members will remain in isolation until their team is called to work the “hands on” first aid problems. The order that teams will be called out of isolation will be in accordance with their draw for starting positions. If a team member needs to leave isolation for any reason before their team is called (rest room, smoke break, etc.), they must be escorted at all times by a contest official. Team members will not be allowed to leave isolation to retrieve first aid supplies or other items that they failed to bring with them when they entered isolation. No cell phones, blackberries, iPhones, Droids, smart phones, etc. or any other type of wireless communication device will be allowed in isolation. Laptop computers are allowed, but they may not be linked or connected to the internet, or otherwise used for either one-way or two-way wireless communications to other persons either inside or outside isolation. Each team may have up to two non-team members in addition to the alternate team member remain with them in isolation if they wish. If any non-team member leaves isolation unescorted, they will not be allowed to return.

NOTE: Any violation of the above rules, such as a team member leaving isolation without an authorized escort or cell phone use while in isolation, will result in team disqualification.

3. CONTEST EVENTS AND PROCEDURES

3.1. The First Aid Contest will consist of three “hands on” first aid problems plus a written examination.

3.2. There will be a minimum of two (2) judges at each station where the teams will work the “hands on” first aid problems.

3.3. Judges will assess point discounts in accordance with the tasks and corresponding assigned point values shown on the judge’s discount cards. The judges will also record observations and comments relating to their assessed discounts on the discount cards. Judges discount cards will be provided to teams upon request prior to the contest so they will know in advance exactly what tasks, actions and procedures will be scrutinized by the judges.

3.4. Judges will be current in first aid methods and knowledgeable in the first aid contest station they will be judging.

3.5. Teams will be required to work three (3) “hands on” first aid problems that will be staged at separate first aid stations.

- a. One station will be for CPR. When a team arrives at the CPR station, the judges will randomly pick one team member to administer CPR on a standard CPR mannequin. After that team member has finished, the other team member will be instructed to administer CPR on a CPR mannequin simulating

an unresponsive victim with a foreign body obstructed airway. When that team member has finished, the team will be instructed to perform two-rescuer CPR on a CPR mannequin. The mannequins will be provided by the contest, but barrier devices, such as pocket face masks or face shields, must be provided by the team.

NOTE: See rule 3.9 for important information concerning CPR guidelines and procedures.

NOTE: Use of an AED is not part of the CPR event for this contest. For this contest event, teams will assume the role of first responders who perform CPR prior to the arrival of EMS professionals with an AED. Team members should continue to perform CPR per the AHA 2010 CPR guidelines for trained lay rescuers until told by a judge that the EMS professionals have arrived to take over the resuscitation.

- b. Two stations will be for patient assessment, control of bleeding, physical shock, wounds, burns, scalds, musculoskeletal injuries, and transportation. After the team arrives at a station and is introduced to the judges, they will be provided with a written first aid scenario. When the team receives the first aid scenario, the clock will be started. Contest officials will serve as patients. There may be up to two patients requiring treatment at each station, and they may be conscious or unconscious. The patients will have moulage applied to simulate their injuries. Prior to completing the problem, and if necessary, the team will place one patient on a stretcher and prepare this patient for transport. The team must decide, based on triage principles, which patient to prepare for transport. *Once on the stretcher, the team will not actually lift the patient.* When the team has completed their work at this station, they must inform the judges that they are done so the judges can stop the clock.

Teams will be told which station to go to first. They will work the problem at that station, and then be told which station to go to next.

3.6. Judges will accurately time first aid tasks, as appropriate, and record times on the judge's discount card. For example, when administering CPR, 5 complete sets of chest compressions and rescue breaths (each set consists of 30 compressions and 2 breaths) must be completed within 2 minutes to avoid the indicated discount.

3.7. At a patient assessment/treatment/transport station, teams must rely on the information provided in the written first aid scenario. Judges will not answer any questions relating to, or add to the information provided in, the written first aid scenario given to the team. If the team asks a question about a technical problem relating to the staging of a scenario, the judges will respond appropriately. For example, if a piece of medical moulage simulating a compound fracture of the tibia

inadvertently falls off of a victim's leg, the judges will stop the clock and reposition the moulage. The judges will also respond appropriately if asked about a physiological condition that cannot be simulated with medical moulage, such as weak or rapid pulse, shallow breathing, high or low body temperature, perspiration, dilated, constricted, or uneven pupils, whether direct pressure applied to a wound site has stopped bleeding, etc.

When the medical moulage, props, or a victim's presentation are ambiguous as to the corresponding medical signs and symptoms, the judges will confirm whether the team's diagnosis of the nature of an injury or medical condition is correct or incorrect. For example, medical moulage consisting of very dark red or black make-up applied to a victim's forearm could indicate either a burn or a contusion, or possibly a fracture, and the patient might report symptoms that could be reasonably expected for any of these conditions. Thus, in this example, the medical signs (directly observed by the team) and symptoms (subjectively reported by the patient) would not point to a specific injury or condition. In this case, the team would verbally state the signs and symptoms they have identified, and their diagnosis as to the corresponding injury or condition. The judges will then confirm whether the team's diagnosis is correct or incorrect.

3.8. Only judges, contest officials, escorted photographers, and news media approved by the contest director will be permitted in the first aid stations. With the approval of the contest director, alternate team members and a limited number of other mining company personnel may be permitted to observe their team perform the "hands on" events in the first aid stations.

3.9. Chapters 4, 5, 6, 7, 8, 9, 10, and 11 of the Eighth Edition of Brady "First Responder" (First Responder, 8th edition by Bergeron and Le Baudour, Prentice Hall, 2009), the current (2010) American Heart Association Guidelines for Cardiopulmonary Resuscitation, 30CFR Part 56, the contest rules, and the judge's discount sheets are authorized for reference and guidance, and will be the basis for judging the "hands on" problems.

NOTE: The American Heart Association (AHA) Guidelines for Cardiopulmonary Resuscitation were revised in October 2010. These revised guidelines vary in several important respects from the CPR and artificial respiration procedures outlined in Module 4 of Brady "First Responder," which are based on the AHA's 2005 CPR guidelines. Where there are differences between the AHA 2010 CPR guidelines and the procedures outlined in Module 4 of Brady "First Responder," this contest will be judged in accordance with the AHA 2010 CPR guidelines.

3.10. The team will not be permitted to use first aid manuals or other reference books during the written examination or while working a "hands on" first aid problem, but they can refer to such manuals or books while in isolation after the written examination.

3.11. There will be no simulations on the patient unless simulation of a specific procedure is authorized by rules or by the judges. All dressings and splints must be placed and applied properly. The team will be instructed by the judges if they may cut the clothing from the patient in order to treat injuries or wounds. If the team is told they may not cut clothing, the team must simulate cutting clothing whenever necessary to treat the patient, and they must tell the judges whenever they are doing so.

3.12 Team members must wear/use appropriate body substance isolation (BSI, such as glasses or goggles, impervious gloves, CPR barrier device, etc.) when making physical contact with any patient, including both the CPR mannequins and the "live" victims at the patient assessment/treatment/transport station(s). BSI must be changed whenever a different patient is contacted to prevent the potential for cross-contamination.

3.13. If oxygen is required in the treatment of a patient, it may be simulated (team needs to tell judges they are administering oxygen to the patient). No oxygen tank will be required.

3.14. Administration of stimulants or medications will be simulated only. Teams will also simulate treatments involving any liquids or creams such as application of moistened bandages, use of eye wash or liquid sterilizing agents, application of antibiotic ointments, etc. In these instances, a team member must tell the judges they are simulating the use or application of these products.

3.15. Team members are not allowed to leave the working area to obtain materials for the problem.

3.16. When digital pressure is applied to the proper pressure point, bleeding will be considered under control when acknowledged by the judge.

3.17. Rough treatment of patients is not allowed.

3.18. If a tourniquet is required in any First Aid problem, it must not be secured tightly.

3.19 Special Rule for Foreign Body Obstructed Airway Unresponsive Victim CPR: Unlike ordinary CPR, the foreign body obstructed airway unresponsive victim resuscitation includes the extra step of checking the mouth for a visible foreign body, and removing it if seen. Normally, this extra step would not require much, if any additional time. According to the 2010 American Heart Association CPR Guidelines at page S696, "Simply looking into the mouth should not significantly increase the time needed to attempt the ventilations and proceed to the 30 chest compressions." However, this step in the CPR process *in a contest* is different than the "real world" because in a contest, in addition to looking into the mouth, the team member needs to ask the judge, "is a foreign body visible?" and the judge needs to respond either "yes" or "no." This interaction with the judge is unavoidable, and it will take a little time.

Therefore, an additional 4 seconds will be added to the allowed time for each set of 30 compressions and 2 rescue breaths.

In the event that, when asked, the judge responds that a foreign body is visible, the team member should simulate reaching in to remove the object, and the judge will then indicate whether the person has started breathing.

3.20 Special "Bystander Assistance" Rule: When a first responder team arrives at the site of an accident, if there is a possibility of neck or spinal injury, or if the trauma victim is non-responsive, standard practice is to manually stabilize the head and neck until a cervical collar can be fitted to the victim/patient. If a team member manually stabilizes the head and neck, that leaves only one other team member to conduct the primary assessment, administer treatments, etc. In the "real world," it is not uncommon for a two-person first responder team arriving at the scene to ask a bystander to assist them by manually stabilizing the victim's head and neck, thereby enabling both responders to work on the victim/patient. After the victim/patient has been assessed and treated, and a cervical collar fitted, the team may also require the bystander to assist in performing a "log roll" to place the victim/patient on the stretcher/backboard. Such bystander assistance will be allowed in the contest, however, the team must assume that the bystander has zero first aid training. The responsibility lies with the team to provide explicit instruction to the bystander, and explain exactly what they need to do, including use of appropriate BSI. The team is not required to ask a bystander for assistance in manually stabilizing the head and neck and/or placing the victim/patient on the stretcher/backboard, but they may if they wish, and will not be discounted for doing so. A contest official will be available at each patient assessment/treatment/transport station to act as a "bystander," should a team wish to make such a request.

3.21. The team will be allowed a maximum of 30 minutes to complete the problem at each station. Once the team has completed the problem at a station, the judges will be allowed 15 minutes to complete their discount cards. The judges and the team will then have 10 minutes to discuss the discounts, during which time the team may examine the discount cards. The team will then have 5 minutes to collect their gear and move to the next station.

3.22. If a team fails to complete a "hands on" problem within the specified 30 minute time limit, they will receive 25 discounts for each problem not completed.

4. WRITTEN EXAMINATION

4.1. Both team members must take the written examination. There will be no talking, gesturing, signaling, or any other form of collaboration or sharing of information between team members during the written examination. The written examination is "closed book," meaning team members will not be permitted to use or refer to first aid

manuals, other reference books, or any other source of reference information during the examination, whether printed, hand written, electronic, or in any other form. Exactly 1 hour will be allowed to complete the written examination. At the end of the allotted time, all examinations will be collected regardless of whether or not all questions have been answered.

4.2. The written examination will be given in isolation after the team briefing and the draw for starting positions. The written examination will consist of up to thirty-five (35) true/ false and multiple choice questions. The questions will be taken from the Eighth Edition of Brady "First Responder", Chapters: 4, 5, 6, 7, 8, 9, 10, and 11 and the current (2010) American Heart Association Guidelines for Cardiopulmonary Resuscitation. The contestants will be assessed one (1) discount for each incorrect or unanswered question. Any alterations to the test questions or answers will be determined to be incorrect by the test judge and discounts assessed.

NOTE: See rule 3.9 (above) concerning CPR guidelines and procedures.

4.3. In special circumstances, individual team members may be given an oral examination by one or more judges in lieu of a written examination. Requests for consideration shall be presented to the Contest Director at the time of registration. All other team members will take the written examination at the same time. The judges will not explain the meaning of questions, but may explain a word or words in the questions.

5. DISCOUNTS AND SCORING

5.1. Discounts will not be added to the team score once the judges have signed their discount cards following a review with team members, however discounts may be removed by the Appeals Committee. This does not preclude correcting administrative errors, arithmetic mistakes, or the misapplication of a rule.

5.2. Teams will not be discounted more than once for any one mistake in the same problem where such mistake may qualify under more than one discount. For example, if a team did not treat a suspected fracture, they would receive 10 discounts, but they would not receive an additional 2 discounts for failure to properly splint that suspected fracture. Judges will confer and assess the highest single discount.

5.3. Teams will be discounted separately for repetition of the same mistakes in the same problem. For example; improper bandaging on two separate wounds (2 times the appropriate discount), three granny knots (3 times the appropriate discount), etc.

5.4. Teams will not be discounted for doing more than the problem calls for, unless it is detrimental to the patient or constitutes improper care.

5.5 Tie Breakers. In the event of tie scores, the first tie breaker will be scores on the "hands on" events (CPR and patient assessment/treatment/transport), second tie breaker will be scores on written examinations, and third tie breaker will be total time required to complete all tasks at the patient assessment/treatment/transport station(s).

6. APPEALS

6.1. After the team completes working a problem at a station, the judges will inform the team of any discounts assessed. The team will be permitted to view the discount card and verbally appeal any discounts with the judges at that time. If not resolved, the field judges' decisions will be final unless and until a written appeal is filed by the team.

6.2. During the verbal appeal process, all questionable splints, dressings and other treatments must remain intact. If any questionable splints, dressings or treatments are removed or altered by the team prior to the team making its verbal appeal, the appeal will not be allowed.

6.3. After the team finishes its final station, they will be instructed where to go if they wish to review their written examinations and see all of their discount cards again. Teams will have a total of 30 minutes to review their written examinations and discount cards and prepare and submit appeals to any exam questions or discounts. All appeals must be in writing, be legible, and clearly state the team's objection(s) to the discount in question. All appeals will be considered by the Appeals Committee and their decision will be binding and final.

List of recommended first aid supplies, materials, and equipment

- 4 Multi-trauma dressing
 - 20 pr BSI gloves
 - 2 pr BSI safety goggles
 - 2 CPR pocket masks
 - 20 Alcohol preps
 - 1 box Adhesive bandages, 1" x 3"
 - 1 box Butterfly bandages, medium
 - 35 2" x 2" gauze pads
 - 4 Tongue depressor/finger splint
 - 1 roll plastic medical tape
 - 1 pr Trauma shears
 - 4 5" x 9" dressings
 - 20 4" x 4" gauze pads
 - 4 3" gauze rolls
 - 8 Triangular bandages
 - 2 Elastic bandage, 3"
 - 2 Elastic bandage 4"
 - 1 Mylar survival blanket
 - 1 Regular blanket
 - 1 set Oral airways
 - 1 Stethoscope
 - 1 Blood pressure cuff
 - 4 Instant cold packs
 - 2 Eye protector
 - 1 Occlusive dressing (Restore Hydrocolloid Dressing), 4" x 4" with tapered edges
 - 1 C-collar, cervical spine immobilization device
 - 1 Splint kit or SAM splints (various sizes)
 - 2 Instant glucose
 - 20 Antimicrobial hand wipes
 - 10 Antibiotic ointment
 - 2 Eyewash
 - 1 Burn dressing, 8" x 3'
 - 1 Large dressing, 10" x 30"
 - 5 Eye pads
 - 1 Tourniquet
 - 1 Head immobilizer
 - 1 Back board/stretcher
 - 1 Stretcher straps
- A head immobilizer, back board, and set of stretcher straps will be provided by the contest at each station, but teams may bring and use their own if they wish