

REPORTS OF INVESTIGATIONS

BUREAU OF MINES - NOVEMBER, 1920 - - DEPARTMENT OF INTERIOR

METHODS FOR THE JUDGING OF FIRST-AID CONTESTS

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An important function of the U. S. Bureau of Mines is to instruct miners in first aid, and as a means of promoting interest in it first-aid contests are held under the auspices of the Bureau, usually in cooperation with other interested organizations, especially the American Red Cross, the National Safety Council and various operators' and miners' associations. It was early found that the method of judging first-aid meets is one of the most vital factors in determining the degree of success of the meet.

It may be safely stated that there is no method for the judging of first-aid contests that has proved ideal. A method that would give the most uniform judging would necessitate the rating of each team by the same judge or committee of judges and, in order that a judge may rate a team satisfactorily, he should see that team perform several events and average the ratings. Such a procedure is not practicable where there are many teams entered in the contest, as it would prolong the meet indefinitely. To overcome this objection the method has been tried of assigning separate judges to each team, but this brings in a new factor - the individuality of the various judges, some of whom rate closely, others loosely. The next development was to average the judging by having the judges rate different teams for each event. This would seem to solve the problem but it has been found, after using the method over a wide area for a considerable period of time, that the differences in the judging are too marked to be at all satisfactory. The next development was to appoint a committee of chief judges - three to five in number - especially trained and experienced, to aid the individual judges in rating the teams. This method has proved satisfactory at small meets but, as the committee must review the work of each judge on each event, it has not been deemed feasible for a large meet.

With the view of avoiding the objections to the above methods, the following was devised and first used at the International Mine Rescue and First-Aid Meet, held in Denver in September, 1920. Each team shall be rated by a committee of three judges, two of whom shall be physicians conversant with first-aid methods and one a layman trained in first aid and familiar with underground mining methods, each team to be judged by a different committee for each event. There shall be not less than three events in each contest, which gives at least nine ratings made by nine different persons for each team which, when averaged, form the score of that team. To further insure that the judging might be as uniform as possible, the following precautions were decided upon by a committee of representatives of the American Red Cross, the U. S. Public Health Service, and the U. S. Bureau of Mines:

1. That in the future at meets authorized by the American Red Cross or the U. S. Bureau of Mines one manual shall be used as official. To this end, the Red Cross and the Bureau of Mines are now engaged in revising their first-aid manuals for miners so that both when issued will have identical texts;

2. That there shall be a committee of chief judges, consisting of two physicians and one layman, with whom the judges may confer for advice;

3. That all judges' score cards shall have the problems stated at the top with the discount table and space for discounts below, and that on the back of the card there shall be an outline of the correct method of doing the problem according to the manual selected as official (at the Denver Meet, the Bureau of Mines manual) and also a list of the more common mistakes made in performing the event (sample card as illustrated herewith was multigraphed on a heavy card board)

That all judges shall be called together a few days previous to the meet and the first-aid methods demonstrated as a review, and that the use of the score card shall be thoroughly explained to the judges at this meeting in order to avoid mistakes during the contest.

Analysis of the scores made by the teams at the International First Aid Contest at Denver shows that the teams receiving high ratings with one set of judges generally received similar ratings from the other sets. There were, of course, a few exceptions, for example, one team had received good ratings on all except one event. On investigation it was found, however, that this team had entirely neglected to give artificial respiration in an event where it was specifically stated in the instructions that artificial respiration should be given a definite number of minutes. Of the 68 competing teams at the Meet referred to, 40 had final scores above 90 per cent and all but one team had scores above 80 per cent. Many of the teams differed only by one-ninth of 1 per cent, and there were only two placed tied in the 20 highest scores.

This method of judging, with the precautions outlined, received almost universal approval by the teams, judges, spectators, and press. At the Milwaukee meeting of the National Safety Council, the Mining Section voted unanimously to adopt the method described as standard for meets authorized by that organization, and as a further effort to standardize first aid, the following resolution was adopted unanimously: "Endorsement is given to the two standard first aid textbooks to be issued with identical text by the U. S. Bureau of Mines and the Red Cross, whose miners' editions are now in the course of revision." This makes both the text and the method of judging first aid standard, as far as the mining industry is concerned, for the American Red Cross, the National Safety Council, the U. S. Public Health Service, and the U. S. Bureau of Mines. --U. S. Bureau of Mines, Reports of Investigations

JUDGES' SCORE CARD

READING TIME: 2 MINUTES - - WORKING TIME: 8 MINUTES

PROBLEM: No. 2 Miner rescued after suffocation by carbon monoxide is breathing shallow about 4 times per minute; has simple fracture of both bones of middle of right leg and wound on back of left forearm 4" below point of elbow; bleeding in spurts. In state of shock, unconscious. Give artificial respiration 2 minutes.

(SEE PAGES* 33, 45, 56, 96, 26.)

	Discount
1. Not doing the most important thing first:	
a Failure to temporarily control hemorrhage previous to application of tourniquet	7
b Failure to remove patient from dangerous gas, roof, electric wire, etc. at proper time	4
c Failure to do the most important thing first otherwise than specified in a and b	6
2. Slow and indifferent work:	
a Slowness in work - Deduct one point for each minute or fraction thereof consumed over time allotted for working problem	1
b Lack of attention on part of one or more team members	2
c Lack of neatness	1
3. Defects in bandaging:	
a Failure to entirely cover wound	2
b Bandaging or treating wrong location of injury	2
c Tight bandage	2
d Loose bandage	2
e Improperly applied bandage	2
f Insecure or granny knot	1
4. Defects in artificial respiration:	
a Improper or insufficient preparation of patient for artificial resuscitation	3
b Incorrect timing of artificial respiration	2
c Ineffective method of artificial respiration	9
5. Splints:	
a Splint improperly padded	2
b Splint improperly applied	4
6. Unclean first-aid material	3
7. Failure to be aseptic	9
8. Failure to have on hand sufficient and proper material to complete dressings	3
9. Awkward handling of patient	4
10. Assistance lent by patient	2
11. Arterial bleeding:	
a Application of tourniquet so as to not stop bleeding	10
b For non-application of tourniquet charge additional to	2
c Tourniquet applied so as to stop bleeding but at wrong points, or in such way as to injure patient	4
12. Not treating shock	6
13. Failure to command properly	1
14. Improper treatment not covered by above, such as	

OUTLINE OF PROBLEM NO. 2

WORKING TIME --- 8 MINUTES

1. Arterial hemorrhage from laceration on left forearm.
 - a. Temporary pressure over point of pressure at elbow or on arm.
 - b. Prepare and apply tourniquet at same point.
 - c.
 1. Place bandage compress directly over wound and tie.
 2. Pass ends several times around forearm tying over injury.
No discount should be made if method of dressing wrist or forearm, paragraph 1, page 57, is used.
(SEE PAGES* 40 and 57).
 2. For shallow breathing start artificial respiration.
 - a. Turn patient on face.
 - b. Remove foreign bodies from mouth.
 - c. Keep tongue well forward.
 - d. Turn head to one side, resting it on his forearm.
 - e. Extend other arm.
 - f. Start Schaefer (prone) method of artificial respiration at once.
Demonstrate 2 minutes. (SEE PAGE 33)
Above should be done simultaneously.
 3. Fracture of both bones of right leg.
 - a. Grasp foot and place limb in as nearly natural position as possible.
At same time assistant supports under part of limb on either side of break.
 - b. Splints 4" wide, length from middle of thigh to 1" below heel. Pad well. Apply splints on either side of leg.
 - c. Use 4 cravat bandages: 1st above fracture, 2d below fracture, 3d upper part of splints, 4th around ankle. All knots should be tied over outer splint. (SEE PAGE 96)
 4. Shock.
 - a. Place patient in comfortable position. Head low.
 - b. Remove foreign bodies from mouth.
 - c. Wrap in blankets, clothing, etc.
 - d. Aromatic spirits of ammonia on cloth, place under nose.
 - e. Place hot water bottles, hot bricks, etc., under covering.
Wrap above in paper or cloth to prevent burning patient.
 - f. Rub extremities toward body under coverings. (SEE PAGE 26)
- MORE COMMON MISTAKES-
- a. Failure to temporarily control hemorrhage.
 - b. Failure to apply tourniquet effectively.
 - c. Improper timing, too rapid or too slow.
 - d. Poor rhythm, irregular.
 - e. Hands of operator improperly placed on patient's back.
 - f. Violent impact at end of forward movement.
 - g. Failure of captain to advantageously use his opportunity to treat shock.
 - h. Giving liquids by mouth to unconscious person.
 - i. Failure to lower head.
 - j. Failure to properly support fractured bones while handling patient.
 - k. Special care must be taken or simple fracture of leg will be converted into compound fracture due to thinness of skin over tibia.

TEAMS SHOULD NOT BE PENALIZED FOR DOING MORE THAN OUT-
ABOVE UNLESS IT IS DETRIMENTAL TO THE PATIENT

END