

THE MEDICAL RESOURCES AVAILABLE DURING SELECTED
VARSITY ATHLETIC EVENTS IN MONTANA'S CLASS AA AND A SCHOOLS

by

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ABSTRACT

The problem of this study was to present the available medical resources present during athletic events in selected Montana High Schools. The four sports chosen for this study were: Football; Basketball; Track and Field; and Wrestling.

A questionnaire developed by the investigator was used in this study to survey existing practices, procedures, and status of the medical resources available during athletic events.

The findings of the study showed that all thirty-two schools selected had some type of facility in which medical personnel could provide first-aid services for participants engaged in the athletic program. The over-all status of medical equipment in the schools surveyed was sufficient. The strongest point was 100 percent of the schools had field kits with supplies. The weakest point in this area was that only fifteen of the thirty-two schools had immediate disposal of a telephone in case of an injury.

The medical supervision varies with each school, with the coach being involved with the overall planning of the sports medical program.

It was concluded that provisions for available emergency transportation at athletic events where injury hazard is pronounced and written statements governing the handling and care of athletic injuries are non-existent in the majority of Montana high schools.

Football has precedence over all other athletic events for which medical supervision and equipment are available. Medical supervision and equipment at other athletic events is ignored.

CHAPTER I

INTRODUCTION

It is a recognized fact that the Physical stresses of sports competition produce occasional injury and in some instances even death. Athletic participants, from Little League to professional play, face the possibility of injury.

The attitudes of people toward the athletic program, the school, and the morale of the players are greatly influenced by the medical resources available as well as the method employed in the handling and care of the injured athlete.¹ The problem of handling and care of athletic injuries has important implications for persons involved in coaching athletics. Every athlete should have the protection of adequate medical supervision, care, facilities, and equipment. In many communities coaches have some medical consultation at their disposal. A team volunteer physician may help by being present at games and providing immediate care for injuries.

A well-organized program of handling and caring for injuries may provide a stimulus to encourage student participation and parent approval in all phases of the athletic program. The combined efforts of school administrations, parents, coaches and the community are

¹Geo. A. Stromgren, "Measure for a Successful Athletic Program," Journal of Health, Physical Education, and Recreation (November, 1959), Vol. 30, p. 27.

essential in developing a successful program of caring for sports injuries in the high school. Data presented in this paper may assist coaches and administrators in evaluating their own methods and available resources used in the handling and care of athletic injuries.

Statement of the Problem

The general problem in this study was to determine the medical resources available during athletic events in selected Montana High Schools. More specifically an attempt was made to answer the following:

1. The type of school owned resources available to handle athletic injuries.
2. The medical supervision furnished for athletic contests.
3. The athletic events for which medical supervision and equipment are available.
4. The procedures for handling and care of athletic injuries.
5. The provisions for athletic injuries.
6. The policies of the school governing the handling and care of athletic injuries.
7. The preparation of the coaching staff for treatment and care of athletic injuries.

Delimitations of the Problem

After analysis of the problem, it was decided to delimit this study to: (1) Class AA and A High Schools in Montana; (2) the school year 1968-69; (3) selected athletic events approved by the Montana High School Association which were Football, Basketball, Track and Field, and Wrestling; and (4) the medical resources available to the athletic program in the selected schools.

Definitions of Terms

In order for the reader to understand the meaning of terms used in this study, the following definitions are provided as a guide to better understanding.

Athletic Injuries--injuries sustained as a direct result of participation during a game in any athletic event approved by the Montana High School Association.

Medical resources--anything that lies ready for use or can be drawn upon to aid or supply the handling and care of an athletic injury. These resources include: (1) medical equipment; (2) medical facilities; (3) medical personnel; and (4) medical knowledge.

Medical supervision--the service of a physician in recognizing and referring injuries for prompt medical attention.

Trainer--a qualified person working in close association with a physician to supervise the athlete's conditioning program, to fit the care for protective equipment, to render first aid in emergencies, and to carry out physical therapy. He never assumes sole responsibility for any aspect of medical care.²

Medical facilities--an area or space in which medical personnel may provide first-aid services and meet the needs of participants engaged in the athletic program.

Diagnosis--the act or process of deciding the nature of an injury by the examination of a licensed physician.

Treatment--treatment is the act, manner, and method used in handling and caring for injuries.

Justification of Study

It is not only the moral responsibility but the legal

²Allan J. Ryan, Medical Care of the Athlete (New York: McGraw-Hill Company, 1962), p. 50.

responsibility of the school and those associated with the athletic program to provide optimal medical resources for the handling and care of injuries incurred by the athlete during competition and practice.

The handling and care of athletic injuries has important legal implications for persons involved in coaching athletics. Inter-scholastic athletics are responsible for many injuries which result in court action.³

With the increasing scope of athletic programs in the high schools, the question of establishing procedures for maximum care and handling of athletic injuries has become more important. The establishment of procedures should be facilitated by a study of the medical resources available during athletic events.

It is hoped that the information gained from this paper may serve as a guide in the development of policies for handling and care of injuries incurred during athletic contests.

It is believed this study should be of assistance and interest to coaches, school administrators, and parents in evaluating their high school's methods and provisions for handling and care of athletic injuries.

Review of Related Literature

In reviewing the literature, very few studies were found on

³ Michael R. Bula, "The Personal Liability of the Coach and Physical Education Teacher," Athletic Journal, Vol. 65, (June, 1965), p. 47.

medical resources available during athletic events, and the author could not locate any which had been done in Montana.

Hair's study concerning physicians attendance at athletic events in South Carolina high schools indicates the physician's participation was more or less limited to game attendance. There was not much indication that as a routine thing he was involved with the overall planning of the sports medical program.⁴

Allman's study comparing the 24 Atlanta, Georgia high schools with other athletic injury programs concluded that the methods of financing an athletic injury program depended upon the needs and desires of the community.⁵

Callicut conducted a study concerning the athletic injury program in one hundred secondary schools of Iowa. Results of this study indicate that the medical resources available are the most overlooked and weakest aspect in the high school athletic program.⁶

Clark, in a study of the sports injury programs and medical care available for students in secondary schools, found that the small,

⁴Judson E. Hair, "Control of Infections in the Sports Environment," Medical Aspects of Sports, (Sixth National Conference of the American Medical Association, November, 1962), p. 47.

⁵Fred L. Allman, "A Program for Prevention and Treatment of High School Football Injuries," Medical Aspects of Sports, (Fifth National Conference of the American Medical Association, December, 1963), pp. 64-69.

⁶Phillip A. Callicutt, "A Study of Training Facilities and Procedures of Selected Secondary Schools of Iowa," (unpublished Master's thesis, Iowa State University, Ames, 1964).

medium, and large secondary schools within the triple classifications of public, independent day and boarding schools and totaling some thirty thousand institutions, have unavoidably, many different patterns and levels of care for sports injuries. He found this situation is further complicated by the limited available supply of qualified trainers, coach/trainers with experience, and interested part-time physicians familiar with the disciplines involved in the area of sports medicine.⁷

Clark summarizes some of the less appealing aspects of the medical and paramedical responsibilities for sports injuries in high schools. These are summarized as follows: (1) As team physicians, (some under duress), approximately 25,000 doctors must be attending varsity and other high school football games on Saturday afternoons in the autumn without any association with the school they are representing other than giving the usual perfunctory annual physical examination, if that. These high school team physicians are allowed to take complete responsibility for any patient only infrequently. The latter usually are referred to the family doctor in the area who may or may not have interest in or knowledge of sports injuries. The result can be under or over treatment. (2) There are hundreds of trainers, primarily coaches, who screen and treat minor conditions

⁷Donald M. Clark, "Some Medical Aspects of Pre-College Sports for Boys," Medical Aspects of Sports, (Sixth National Conference of the American Medical Association: November, 1964), pp. 24-30.

in the high school and in small independent school areas. Usually they have had little if any formal or other association with medicine except such exposure as they may have had as players. (3) Inadequate, too little, or too late budgets are not uncommon where facilities and equipment are badly needed.⁸

In 1966, Yoachum wrote a Master's Thesis on the Medical Resources available during athletic events in six selected districts within the Utah High School System. He compared the medical resources available in Utah High Schools with the American Medical Association Standards.

His study consisted of a cross section between medium sized rural schools and the larger city schools in Utah. Throughout the thesis he related each part of the study to the American Medical Association.

One of the significant points he found was that over fifty percent of the schools selected had student trainers with some of these having no previous preparation or training. He also found that the coaching staff for the handling and caring of athletic injuries incurred in the athletic programs of Utah High Schools was superior.⁹

⁸Clark, op. cit., p. 24.

⁹Bernie Dean Yoachum, "Medical Resources Available During Athletic Events in Selected Utah High Schools," (unpublished Master's Thesis, University of Utah, 1966).

CHAPTER II

METHOD OF STUDY

This study was prompted by the desire of the writer to obtain data concerning the current practice, procedure and status of the medical resources available during athletic events in Montana's Class AA and A schools.

As far as could be determined, no study of medical resources available at athletic events previously had been made in Montana. Available data on this topic was weak and appeared not to be representative of the situation at hand.

Preliminary Procedures

In beginning this study the criteria used in selecting the schools and athletic events had to be determined. After analyzing the problem, it was decided the criteria used would be based on:

1. Montana's Class AA and A schools.
2. The athletic events participated in by each school.
3. The athletic events approved by the Montana High School Association.

At the present time there are sixteen Class AA schools and sixteen Class A schools in Montana. With the help of Rex Dalley, Executive Secretary, Montana High School Association, four athletic events were selected to meet the needs of this study. The athletic events were: (1) football; (2) basketball; (3) track and field, and (4) wrestling.

The next step was to determine which method of collection would be best for achieving the purposes of this study. The construction of an instrument for determining available medical resources for athletic events in selected Montana High Schools was then necessary.

Sources of Data for Study

A review of related literature, personal correspondence, and personal observations were used as a basis for constructing a questionnaire. (See Appendix B) This questionnaire which was designed and developed by the investigator was then used to collect data for the study.

For the sake of brevity, a number of tables were arranged. These tables appear in order in the following chapters in order to better illustrate the details concerning the medical resources available during athletic events. Tables have been constructed, keeping simplicity and clarity in mind at all times.

The Questionnaire and Distribution

The survey method was used to gain information for the problem. A questionnaire was developed by the writer and pre-tested on six graduate assistants receiving their masters in Physical Education, and Dr. Gary Evans, Coordinator of Graduate Studies in Physical Education, all from Montana State University. In constructing the questionnaire, guidelines suggested in the text Research Methods, by the AAHPER were used. The guidelines followed were:

(1) the item under consideration should measure what it is intended to measure; (2) the item or question under consideration should contribute to the solution of the problem; (3) unnecessary qualifying phrases should not start the respondent thinking along irrelevant lines; (4) the questions or items should be straightforward and direct; (5) the form of the questionnaire should be such that responses can be made easily; and (6) the responses should lend themselves to tabulation.¹⁰

The American Medical Association recommends various standards and resources that should be available at athletic events. The questionnaire was formulated around these recommended medical resources and standards.

The drafted questionnaire included five basic categories which would meet the needs of the survey. The following categories were included: (1) the type of medical facilities in the school to handle and care for athletic injuries; (2) the type of medical equipment accessible in the school for athletic injuries; (3) the available medical personnel and a supervision present at athletic events; (4) the policies and provisions of the school for athletic injuries; and (5) the preparation of the coaching staff in the handling and care of athletic injuries.

¹⁰ American Association for Health, Physical Education, and Recreation, Research Methods, 2nd Edition (Washington: AAHPER, 1959), p. 102.

Under each of the five categories a list of more exact questions covering specific areas of medical resources in the school for athletic injuries were asked. For example, one of the questions was, "Does your school have a written statement concerning its policy for handling and care of injuries incurred in the athletic program?" Comments and recommendations were also asked for from each respondent.

The next step was to draft an introductory letter to be sent with the questionnaire to a member of the coaching staff of each selected school. A self-addressed envelope was included for convenience and to elicit a prompt reply. A sample of the questionnaire and letter sent to each school in the survey is included in Appendix A and B.

Completed questionnaires were received from all thirty-two schools selected for the survey resulting in a return of one hundred percent.

CHAPTER III

ANALYSIS OF DATA

The purpose of this chapter was to present the results from the study. The data was tabulated, analyzed, and interpreted to determine the medical resources available during athletic events and to provide answers to specific problems related to this study.

Data was obtained by the use of a questionnaire. The questionnaire consisted of five areas of resources that are recommended by the American Medical Association. The five areas are:

1. Medical facilities
2. Medical equipment
3. Medical personnel
4. Policies and provisions of the school pertaining to athletic injuries.
5. Coaching staff preparation for the treatment and care of athletic injuries.

An analysis of the questionnaire returned by the schools indicated that the responses constitute a representative sample and a good cross section of the medium sized rural schools and the larger city schools in Montana.

Table I shows a listing of the names and population of the schools selected for this survey.

Medical Facilities

The primary purpose of medical facilities is to provide first-aid services and meet the needs of participants engaged in the athletic

program. For the sake of clarity, ambulance services have been included as medical facilities.

TABLE I
SCHOOLS SELECTED FOR STUDY

School	Population
Anaconda Central.	224
Anaconda Senior	537
Billings Central.	535
Billings Senior	1,900
Billings West	2,200
Bozeman	1,188
Butte Central	500
Butte Public.	2,200
Columbia Falls.	648
Deer Lodge.	554
Dillon.	490
Glasgow	783
Glendive.	852
Great Falls Central	947
Great Falls Public.	1,842
Great Falls Russell	1,635
Hamilton.	455
Hardin.	426
Havre	947
Helena Central.	340
Helena Public	1,600
Kalispell	1,761
Laurel.	559
Lewistown	698
Libby	902
Livingston.	729
Miles City.	846
Missoula Helgate.	1,700
Missoula Sentinel	1,734
Sidney.	602
Whitefish	532
Wolf Point.	458

1968-69 School Year

It is recommended by the author and the majority of personnel related to athletics that every school having an athletic program be provided with a designated area or room used as the place where emergency care will be given.

As seen in Table II, all schools have some type of facility in which medical personnel may provide first-aid services for participants engaged in the athletic program.

Twenty-eight schools, or 88 percent of the total, had a training room separate from other facilities. Two schools or six percent used the equipment room for first-aid services and two schools used a special area in the dressing room.

TABLE II
TYPES OF SCHOOL OWNED FACILITIES FOR
ATHLETIC INJURIES

Facility	No. of Schools	Percent of Total Schools
Training room separate from other facilities. .	28	88
Equipment room.	2	6
Special area of dressing room	2	6
Coaches office.	0	0
Total.	32	100

Another area surveyed was the immediate disposal of ambulance services for athletic events in which the injury hazard was high. Eighteen schools or 56 percent stated they had an ambulance at their immediate disposal with fourteen schools or 40 percent stating they did not have an ambulance available for athletic events in which the injury hazard was high. (See Table III)

TABLE III
AMBULANCE SERVICES AT
YOUR IMMEDIATE DISPOSAL

Reply	No. of Schools	Percent of Total Schools
Yes	18	56
No.	14	44
Total.	32	100

Medical Equipment

Medical equipment is a resource which can be drawn upon to aid or supply personnel involved in the handling and care of athletic injuries.

Table IV denotes the type of medical equipment that should be available during athletic events. It also denotes the number of schools and percentage of the total schools surveyed that have this equipment.

The most popular item of medical equipment is the field kit with supplies. One hundred percent of the schools in the survey indicated having this item. A large number of schools, 84 percent, revealed having a blanket, but only 69 percent of the schools surveyed reported having a bed or cot.

The whirlpool bath, utilizing the benefits of water, is recommended for treatment of athletic injuries such as sprains, strains, and contusions. Surprisingly, 72 percent of the schools surveyed had this rather expensive piece of equipment.

The weakest point in the area of medical equipment was that only 49 percent of the schools reported having a telephone at their immediate disposal.

It was found that 97 percent of the schools had an examining table and 80 percent had some type of splints.

Other pieces of medical equipment listed by the schools were crutches and oxygen tank. Four schools of the thirty-two surveyed revealed having crutches and only two stated that they had an oxygen tank.

TABLE IV
TYPE OF MEDICAL EQUIPMENT AVAILABLE
FOR ATHLETIC INJURIES

Type of Equipment	Number of Schools Having Equipment	Number of Schools Not Having Equipment	Percent Having Equipment
Blanket.	27	5	84
Bed or Cot	22	10	69
Splints.	26	6	80
Examining Table.	31	1	97
Field Kit with Supplies. . .	32	0	100
Telephone (at Immediate disposal) . .	15	17	49
Whirlpool Bath	23	9	72

Many simple injuries are aggravated by improper methods used in transporting injured athletes. Table V shows the number of schools that have a stretcher on the sidelines during athletic events selected for this study. It also shows the number of schools that have a stretcher but do not have it on the sidelines during athletic events.

Of the athletic events surveyed, football had precedence over all other sports for having a stretcher on the sidelines during games.

During basketball games and wrestling events, the stretchers were at least in the same building that the event was taking place. They had accessibility to them within very short time.

TABLE V

ATHLETIC EVENTS FOR WHICH STRETCHERS ARE AVAILABLE

Type of Event	Number of Schools Having a Stretcher on Sidelines	Number of Schools Having Stretcher, But Not on Sidelines
Football games	32	0
Basketball games	6	26
Track and Field events	4	28
Wrestling events	7	25

The track and field events is probably the most interesting part of this table. Only four schools had a stretcher on the sidelines during track and field events, although all schools had a stretcher in their possession.

Medical Personnel

It is desirable a physician should be present at all athletic contests where injuries are likely to occur. Table VI illustrates physician participation in the athletic events of high schools used in this study.

It should be noted that only twenty out of thirty-two schools have a physician present at football games, eight at basketball games, four at wrestling events, and three at track and field events.

TABLE VI
PHYSICIAN PARTICIPATION IN SELECTED
ATHLETIC EVENTS

Athletic Event	Number of Schools Having A Physician Present	Percentage of Schools
Football games	20	63
Basketball games	8	25
Wrestling events	4	13
Track and Field events	3	9

The study revealed other aspects of physician participation as seen in Table VII. This table shows the arrangement made for obtaining a team physician's services and contest assignments.

Twenty-five schools, or 78 percent of the total schools utilizing a physician, indicated his services were adhered to on a voluntary basis while thirteen percent of the schools employed a physician for a fee. Only two team physicians were employed by the school outside of athletic contests.

Eight schools or 25 percent of the schools that had a physician had the same physician for each contest while nineteen schools or 59 percent had a different physician for each contest. Only four schools or thirteen percent had the same physician for all athletic events during the school year.

The significant thing here is that one school doesn't have a team physician. It was stated that the only time they have a service for a physician is if someone gets injured. If this happens, they take the injured person to the physician.

TABLE VII
ARRANGEMENT AND CONTEST ASSIGNMENT
OF TEAM PHYSICIANS

Arrangement for And Assignment of Physician	Number of Schools	Percent of Schools
Employed by school	2	6
Employed by district	4	13
Volunteer.	25	78
Same physician for each contest.	8	25
Different physician for each contest	19	59
Same physician for all athletic events during the year	4	13

Table VIII is a tabulation of the type of supervision used to diagnose athletic injuries. Forty percent of the schools rely on a physician to diagnose athletic injuries. Only six schools had the coach diagnosing the injury, which is 19 percent. Seven schools or 23 percent had a coach-physician combination to diagnose an injury. Three schools or 9 percent had the trainer-physician combination and three schools or 9 percent had the trainer-coach-physician combination to diagnose the injury.

TABLE VIII
TYPE OF SUPERVISION USED IN DIAGNOSIS
OF ATHLETIC INJURIES

Type of Supervision	Number of Schools	Percentage of Schools
Physician.	13	40
Coach-physician combination.	7	23
Coach only	6	19
Trainer-physician combination.	3	9
Trainer-physician-coach combination.	3	9

Table IX shows who serves as trainer in the selected thirty-two schools during athletic events.

Twenty-eight percent of the schools call on the coach to be the trainer. Nineteen percent of the schools let a coach-student combination handle the duties for a trainer. There is a three way tie for the next in line. Fifteen percent of the students, 15 percent of a staff member-student, and 15 percent of a volunteer person not directly related to school were chosen for the trainer qualifications for their school. One school or four percent let a staff member act as trainer.

Only one school out of the thirty-two that was surveyed has a professional full time trainer.

TABLE IX
DISTRIBUTION OF PERSONNEL IN THE ATHLETIC PROGRAM
CONTRIBUTING SERVICES AS THE TRAINER

Person Who Serves as Trainer	Number of Schools	Percentage of Schools
Coach.	9	28
Coach-student combination.	6	19
Student.	5	15
Staff member-student	5	15
Volunteer person not directly related to school.	5	15
Staff member	1	4
Professional trainer	1	4
Total	32	100

Policies of the School Pertaining to Athletic Injuries

Every school should have a written statement concerning its policy on responsibility for injury incurred in athletics; also some plan of financing or medical coverage for athletic injuries should be available.

Table X relates three things: (1) the number of schools having a written statement concerning its policy or responsibility for injury incurred in the athletic program; (2) whether medical coverage is required before a participant may engage in athletics; and (3) the means by which medical coverage is procured.

As the table shows the area of policy is very poor, with only ten of the thirty-two schools having some type of written statement concerning its policy for handling and caring of athletic injuries.

TABLE X

PROVISIONS FOR MEDICAL COVERAGE AND POLICY OF SCHOOLS
GOVERNING HANDLING AND CARING OF ATHLETIC INJURIES

Provisions and Policy	Number of Schools	Percentage of Schools
Medical coverage required to participate.	26	81
Medical coverage provided on cooperative basis between school and participant . . .	22	68
Medical coverage provided by participant only	9	28
Medical coverage provided by school only	1	4
Written statement governing the handling and caring of athletic injuries.	10	31

Eighty-one percent of the schools required the participant to have medical coverage before engaging in the athletic program. Although all schools did not require medical coverage, the means of procuring coverage varied. Sixty-eight percent, the largest group, revealed that insurance was obtained on a cooperative basis between the school

and the participant. Twenty-eight percent of the schools required the participant to provide for his own insurance and four percent or one school paid the insurance for the participants.

Coaching Staff and Student Trainer Preparation For Athletic Injuries

The coach or faculty member in charge should be competent in first aid and thoroughly informed on sports conditioning and training.

Sixty-eight percent of all coaching members had completed a course at college level in the handling and caring of athletic injuries, and 97 percent had attended clinics and conventions concerning athletic injuries in the last five years.

Table XI is a tabulation of staff preparation for the handling and caring of athletic injuries. The table also lists the instruction completed by student trainers which is offered by various sources.

Ten schools utilized the services of a student trainer, of this number six schools reported their student trainer had no preparation. Four of the student trainers had correspondence and verbal training by the head coach. Twenty-one schools revealed their student trainer had completed instruction offered by "Cramer of Kansas" and the other school stated their student trainer had instruction from the "Logan Company and First Aid Supply".

TABLE XI

COACHING STAFF AND STUDENT TRAINER PREPARATION
FOR HANDLING AND CARE OF ATHLETIC INJURIES

Type of Preparation	Number of Schools	Percentage of Schools
<u>Coaching Staff</u>		
Completion of college courses for the handling and care of athletic injuries.	22	68
Attendance within the last five years at clinics and conventions for the handling of athletic injuries	31	97
<u>Student Trainer Preparation</u>		
Completion of courses offered by "Cramer of Kansas".	21	65
Completion of courses offered by "Logan Company and First Aid Co."	1	4
Correspondence and verbal training by coach.	4	12
Completion of any college course pertaining to the handling and care of athletic injuries.	0	0
No preparation for the handling and care of athletic injuries	6	18

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem of this study was to present the available medical resources present during athletic events in selected Montana High Schools. The major sub-problems of this study were to determine: (1) the type of school owned resources available to handle athletic injuries; (2) the medical supervision furnished for athletic contests; (3) the athletic events for which medical supervision and equipment are available; (4) the procedures for handling and care of athletic injuries; (5) the provisions for athletic injuries; (6) the policies of the school governing the handling and care of athletic injuries; and (7) the preparation of the coaching staff for treatment and care of athletic injuries.

This study was delimited to: (1) high schools of thirty-two selected Montana High Schools; (2) the school year 1968-69; (3) selected athletic events approved by the Montana High School Association; and (4) the medical resources directly related to the athletic program in the selected school.

The survey was used in this study to survey existing practices, procedures, and status of the medical resources available during athletic events in selected Montana High Schools.

The questionnaire response, review of related studies, and

structural interviews were the basis used in analyzing data for this study.

A summary of the findings follows:

1. All of the thirty-two schools selected for this study had some type of facility in which medical personnel could provide first-aid services for participants engaged in the athletic program.
2. The provisions for emergency transportation at athletic events in which the injury hazard is high is insufficient.
3. Over-all the status of medical equipment in the schools surveyed was sufficient. The strong point was 100 percent of the schools had field kits with supplies. The weakest point in this area was that only fifteen of the thirty-two schools had immediate disposal of a telephone in case of an emergency.
4. With the exception of football, the stretcher was practically omitted from the sidelines during other athletic events.
5. Twenty-six out of the thirty-two schools had a team physician at football games. There was not much indication that as a routine thing he was involved with the overall planning of the sports medical program.
6. In 78 percent of the cases the physician was in attendance at athletic events on a voluntary basis.

7. Nineteen out of the thirty-two schools had a different physician for each contest.
8. The physician diagnosed the injuries incurred in athletic events in 40 percent of the schools.
9. Only ten schools revealed having some written statement concerning its policy for handling and care of athletic injuries.
10. Twenty-six schools required athletic insurance before a student was able to participate in the athletic program.
11. Only one school paid the athletic insurance for the athlete and the remaining schools obliged by letting the participant foot the bill or it was a cooperative basis between the school and the participant.
12. The coaching staff preparation for the treatment and care of athletic injuries was adequate in the majority of the schools. Ninety-seven percent of the coaches participated with the training.
13. Most of the student trainers were trained by Cramer of Kansas.

Conclusions

In drawing conclusions from this study, it must be remembered that the findings of this study are based upon representative sample.

The findings of this study would seem to support the following conclusions:

1. The high schools of Montana appear to have adequate school owned medical facilities where first-aid services for athletic injuries are performed.
2. Provisions for available emergency transportation at athletic events where injury hazard is pronounced is practically non-existent.
3. Medical supervision varies with each school, with the coach being involved with the overall planning of the sports medical program.
4. Football has precedence over all other athletic events for which medical supervision and equipment are available. Medical supervision and equipment at other athletic events is almost ignored.
5. The majority of Montana high schools rely on a physician for procedures in handling and care of athletic injuries.
6. There are limited provisions allocated for injuries incurred in the athletic programs of Montana high schools. Insurance is about their only source of money.
7. The preparation of the coaching staff for the handling and care of injuries in the athletic programs of Montana High Schools is adequate.

Recommendations

1. Sound relations between the medical profession and school administrations should be established.

2. Policies governing athletic injuries incurred in the school athletic program should be in written form, distributed to and interpreted by parents, physicians, administrators, participants, and all other involved persons.
3. The school administrator must provide the necessary ways and means of financing a sports medical program. This includes finances for proper leadership, equipment, medical care, and coverage.
4. Every athletic event should have adequate medical supervision, equipment, and facilities.
5. The school should arrange with the U. S. Army Reserve, National Guard, or other agencies that have ambulance services to be present at athletic events where the injury hazard is pronounced.
6. Every athletic event should have a physician in attendance on the bench.
7. Every school should write to the American Medical Association for information on forming a community sports injury conference. This will involve the participation of the school administration, coaches, local physicians and parents.
8. No game should begin until a physician is present.

9. Every high school should have provisions for medical coverage for injuries obtained during athletic events.
10. Not enough school administrators are aware of this aspect of the athletic program.
11. Every school should have a telephone at its immediate disposal in the event of an athletic injury.
12. More schools should have an ambulance for athletic events in which injury hazard is high.
13. Stretchers should be made available at track and field events.
14. More schools should have a professional trainer.

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APPENDIX

Department of Physical Education

April 29, 1969

Dear Coach:

I am a Graduate Student in Physical Education at Montana State University. For my master's thesis I am doing an evaluation of the "Medical Resources Available During Selected Varsity Athletic Events in Montana's Class AA and A Schools."

Will you help, by answering the attached questionnaire? The questionnaire should take approximately five or ten minutes of your time.

The information you give will be compiled with that obtained from other coaches in Class AA and A Schools. One purpose of this study is to determine, so far as possible, the resources available to handle and care for athletic injuries with a view to improving the situation now in practice.

I would appreciate it if you will find time to complete the questionnaire within the next three days and return it in the self-addressed envelope provided for your convenience. Your cooperation is greatly appreciated.

Respectfully yours,

Bert Deglow

Bert Deglow
Graduate Student
Montana State University

Gary F. Evans

Gary F. Evans, Coordinator
Graduate Study
Department of Physical Education

BD:GFE/mb

QUESTIONNAIRE

Please answer all questions pertaining to your situation.

A. MEDICAL FACILITIES:

1. Where are services for your injured athletes performed?

- | | |
|---|-------|
| a. Special area in dressing room. | _____ |
| b. Equipment room | _____ |
| c. Coaches office | _____ |
| d. Training room separate from other facilities | _____ |
| e. Other, please list | _____ |
| f. No facilities available. | _____ |

2. Do you have ambulance services at your immediate disposal, for those athletic events in which the injury hazard is high?
Circle one.

Yes No

B. MEDICAL EQUIPMENT:

3. Which of the following equipment do you have available for your athletic program?

- | | Yes | No |
|---|-------|-------|
| a. Examining table. | _____ | _____ |
| b. Splints. | _____ | _____ |
| c. Field kit with supplies. | _____ | _____ |
| d. Blanket. | _____ | _____ |
| e. Bed or cot | _____ | _____ |
| f. Whirlpool bath | _____ | _____ |
| g. Telephone, at immediate disposal | _____ | _____ |
| h. Other, please list | _____ | _____ |

4. Is a stretcher on the sideline at:

- | | | |
|-------------------------------------|-------|-------|
| a. Football games | _____ | _____ |
| b. Basketball games | _____ | _____ |
| c. Track and Field events | _____ | _____ |
| d. Wrestling events | _____ | _____ |
| e. Other, please list | _____ | _____ |

C. MEDICAL PERSONNEL:

- | | Yes | No |
|---|-------|-------|
| 5. Who diagnoses your athletic injuries: | | |
| a. Trainer. | _____ | _____ |
| b. Coach. | _____ | _____ |
| c. Physician. | _____ | _____ |
| d. Nurse. | _____ | _____ |
| e. Other, please list | _____ | _____ |
| 6. Do you have a team physician present at: | | |
| a. Football games | _____ | _____ |
| b. Basketball games | _____ | _____ |
| c. Track and Field events | _____ | _____ |
| d. Wrestling events | _____ | _____ |
| 7. Is a team physician: | | |
| a. Employed by the school | _____ | _____ |
| b. Employed by the district | _____ | _____ |
| c. Volunteer physician. | _____ | _____ |
| d. Other arrangement, please list | _____ | _____ |
| 8. Is the team physician: | | |
| a. The same physician for each contest. | _____ | _____ |
| b. Different physician for each contest | _____ | _____ |
| c. Same physician for all athletic events
during the school year | _____ | _____ |
| 9. Who serves as your trainer: | | |
| a. Professional trainer | _____ | _____ |
| b. Student. | _____ | _____ |
| c. Staff member | _____ | _____ |
| d. Coach. | _____ | _____ |
| e. Volunteer person not directly related
to school. | _____ | _____ |
| f. No trainer | _____ | _____ |
| g. Other arrangement, please list | _____ | _____ |

D. POLICY FOR HANDLING AND CARING FOR ATHLETIC INJURIES:

10. Is athletic insurance required before a boy may participate in the athletic program of your school? _____

- | | | | |
|-----|---|-------|-------|
| 11. | Is athletic insurance furnished by: | Yes | No |
| a. | The school | _____ | _____ |
| b. | The participant. | _____ | _____ |
| c. | Cooperative basis between school and
participant. | _____ | _____ |
| d. | Other, please state. | _____ | _____ |
| 12. | Does your school have a written policy concerning its policy for
handling and caring for injuries incurred in the athletic
program? _____ | | |

E. STAFF PREPARATION:

13. Have all members of your coaching staff completed a course at the college level in the care and handling of athletic injuries? _____
14. Has a member of the coaching staff attended clinics or conventions concerning athletic injuries within the last five years? _____
15. Has your student trainer completed instruction in the care and handling of athletic injuries offered by:
- a. American Red Cross _____
- b. College courses. _____
- c. No preparation _____
- d. Other, please list _____

NOTE: Check here if you would like to have a copy of the results of the survey when it is made available.

School _____