1935

Status of the health program in Montana high schools

Charles Eugene Hood

The University of Montana

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STATUS OF THE HEALTH PROGRAM

IN

MONTANA HIGH SCHOOLS

by

CHARLES E. HOOD

B.S., Jamestown College, 1927

Presented in partial fulfillment of the requirement for the degree of Master of Arts

State University of Montana

1935

Approved:

W. R. Ames
Chairman of Board of Examiners

W. L. Bateman
Chairman of Committee on Graduate Study
ACKNOWLEDGMENTS

The writer wishes to acknowledge his indebtedness to all who assisted in making this study possible. Thanks are due the one hundred principals and superintendents who filled out and returned the inquiry forms sent them.

Especial appreciation is expressed to Professor W. R. Ames for expert guidance, and to Dean Freeman Daughters for advice in organizing the questionnaire.

Finally, the writer wishes to express grateful appreciation to his wife, Esther Hood, for patient and critical reading and typing of the manuscript.

C. E. H.
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CHAPTER I.
INTRODUCTION

IMPORTANCE OF THE PROBLEM

There is a place for health in any plan of education. No matter what objective we accept, health must be recognized as a means of attaining these objectives. A Committee of the National Educational Association placed health first on the list of the famous seven Cardinal Principles of Education.\(^1\) There are also obvious connections between health and most of the other objectives.

"The health of children is recognized today as one of the most important responsibilities of the public school. What the schools are doing for the children in health instruction is therefore a matter of concern both to the public and to educational authorities. Recently, the rapid development of knowledge has tended to make many people take an interest in health instruction. . . ."\(^2\)

It is very evident that most authorities are agreed that Health should be one of the major fields of education. This holds true from kindergarten to college, and in every type of education. The problem has become even more important in the high schools than in the elementary schools, on account of the rapid rise in enrollment, which naturally throws increased responsibility on the health department.

The amazing growth of our high schools is very ably described by Dr. Edna W. Bailey in a National Tuberculosis Bulletin:

"The rapid rise in number, enrollment, and scope of the American High Schools is an amazing phenomenon. Between 1890 and 1920 the population of the United States increased 69%, while the high school enrollment increased 84.5%. Very few of the generation now in its fifties received a high school education. The population now in its forties had about as many high school educations as the present generation is getting of college educations. Instead of a "nation of sixth graders", we are at present launched on a program which will make us a nation of tenth graders at the very least." 3

The recent tendencies toward prohibiting child labor and raising compulsory age limits probably increase the numbers attending high schools still more.

The health situation in the nation as a whole is considered anything but promising by authorities. Whitney says:

"It is perhaps trite to say that the group of young people aged 15 to 24 is the one which must "carry on" for the entire country. We have intensive health activities and services for the infant, for the pre-school child, for all elementary school children, for mothers, for men in industry, and yet these millions of boys and girls and young men and young women, who are making all their adjustments to life at this critical period, their physiological adjustments, their moral adjustments, their mental, economic and social adaptations, are left untaught in regard to health --their most precious possession. Surely, a neglected age." 4

Hence, it seems timely that a study be made of the status of the health program in the high schools of Montana. It is evident that the health program is of great importance and has been greatly neglected in the secondary schools. The first step in determining what improvements—if any—are necessary, is to determine how extensive a program is now being carried on.

**Nature and Purpose of the Study.**

This study has two objectives: first, to determine the status of the essential features of the Health program in the high schools of Montana, with particular reference to Health Service and Health Instruction; second, to compare this status, whenever possible, with the procedures generally recommended by authorities. Particular comparisons will be made with the data compiled by the National Survey of Secondary Education on the Health Program.

**Previous Studies in the Field.**

To the writer's knowledge, there are no previous studies in the Status of Health Programs in the Montana High Schools. There are several general studies, as will be outlined below:

A study of "Health Education in Montana Catholic Schools" was made by Sister Aimee Ely in 1932. The questionnaire method was used to obtain data from thirty-eight schools, including Indian schools, orphanages, and a
crippled children's hospital. The majority of these schools consisted of elementary grades only.  

One of the most important general studies of Health Work in High Schools was made by the committee on the National Survey of Secondary Education, and published by the Office of Education in 1932. The handling of this survey was entrusted to Dr. Leonard V. Koos, of the University of Chicago. Over 400 highly selected secondary schools were included in this study. The schools were selected on the basis of achievement in Health Work, so naturally their scores should be far above those of the average school. This survey shows many important trends and will be referred to frequently later on in this study.

Another important Health study in the secondary field is that made in 1925 by the American Child Health Association. After awards totaling $1000.00 were offered, 53 schools submitted their health programs. These are described in the bulletin, "Health Trends in Secondary Education." Here again is a selected group, but the trends are discussed much more thoroughly than in the above study, even though the survey is not as recent.


The other references used in this study are listed in the bibliography. Those authorities whose works were considered most valuable were Wood and Howell, Terman and Almack, Keene, Turner, Bailey, and Kerr. The publications of the Joint Committee on Health, of the National Tuberculosis Association, and the Sixth Yearbook of the Department of Superintendence are also referred to quite constantly.

Methods and Scope of this Study.

The data for this study were derived chiefly from the two following sources: (1) Professional literature and related investigations dealing with the subject, and (2) from questionnaires sent to the principals and superintendents of every four-year high school in Montana. Other material was obtained from the records of the State Department of Education, the Montana Tuberculosis Association, and the State Board of Health. Reference is also made to the State School Laws and Courses of Study.

Most of the new data in this report were obtained by the questionnaire method. The author is fully aware of the criticism that has been leveled against this procedure in the past. However, the consensus of opinion now seems to be that as long as it is the only method of securing the information, and that the problem is worthwhile, the questionnaire is an acceptable method for collecting data. In fact, the Journal of Educational Research goes so far as to say that the recipients of valid questionnaires are
under obligation to education to see that the inquiries are answered. Some educators are willing to profit by what is learned but are unwilling to spend a few minutes in assisting.

These questionnaires were sent to the administrators or heads of the high schools in the state of Montana. Practically all of these blanks were filled out by either the superintendent or principal. A few delegated this duty to the school nurse or the principal's secretary. Thus, the inquiry sheets were checked by the persons in the best position to know the facts referred to. The findings should be as reliable as the principals themselves are reliable.

The number and the four classes of schools to which inquiries were sent, and the number and percentage of the replies are given in the following table:

**TABLE I.**

Number of High Schools Represented in this Survey:

<table>
<thead>
<tr>
<th>Schools</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires mailed</td>
<td>5</td>
<td>52</td>
<td>103</td>
<td>19</td>
<td>179</td>
</tr>
<tr>
<td>Questionnaires returned</td>
<td>5</td>
<td>25</td>
<td>59</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Percentage returned</td>
<td>100</td>
<td>48</td>
<td>57.2</td>
<td>52.6</td>
<td>55.9</td>
</tr>
<tr>
<td>Average per cent returned from four classes of high schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64.4</td>
</tr>
</tbody>
</table>

A total of one hundred questionnaires, or 55.9%, were returned in time to be included in this survey. This included 100% of the first class high schools in Montana. These large high schools enroll over 7,000 students, out of 33,000 enrolled in all high schools of Montana. One of the first class high schools, however, overlooked the reverse side of two of the sheets on the questionnaire, so the data on this class of schools are not entirely complete.

Chart I, in the appendix, is a map showing the location of the schools replying to the questionnaires. The types of schools are designated on this map.

It is interesting to note that a slightly larger percentage of questionnaires was returned for this study than for the National Survey of Secondary Education. Fifty-four per cent of the inquiry forms was returned in the latter case.\footnote{Health Work and Physical Education, p. 5.}

Definitions and Explanations.

In Montana, there are four types or classes of high schools, corresponding with the type of school district in which they are located.

A \textit{first class district} has a population of 8,000 or more, employs a superintendent, and is controlled by a board of seven trustees.

A \textit{second class district} has a population of 1,000 or
more, but less than 8,000; employs a superintendent; and is governed by a board of five trustees.

A third class district has a population of less than 1,000, employs a principal as head of the system, and is controlled by a board of three members.

Any county may have a County High School if it so desires. A principal is at the head of this system, and it has a board of seven trustees, of whom six are appointed by the County Commissioners, the seventh being the County Superintendent. This unit is entirely separate from the district school system, although one principal or superintendent may have charge of both schools. County high schools are listed as number 4, or the 4th class in the tables to follow.

The term Health Program as used in this study will include two phases: (1) Health Service, and (2) Health Instruction.

Health Service will include health examinations, follow-up and correction of defects, daily inspections, first aid and safety, immunization, and health of teachers.

Health Instruction will include not only the formal

10. School Laws of Montana, Chapter 79, Section 1021, 1932, p. 33-34.
teaching of such courses as Hygiene, but also the teaching of health in other classes.\textsuperscript{12}

Health education, as a term, will be little used in this study, as some authorities define this as the whole health program,\textsuperscript{13} while others use it in the same sense as health instruction.\textsuperscript{14}

Health and Physical Education Program, as the name would signify, includes physical education in addition to the health services and health instruction.\textsuperscript{15}

Presentation of Data.

The statistical data in this investigation are presented for the most part in tables, followed by discussions which interpret, explain, and draw any possible conclusions from them. Percentages are given when their presence will enable the reader to gain a better or quicker picture of the situation. Measures of central tendency are employed whenever the number of cases warrant their use.

Since there are exactly 100 schools participating in the Montana survey, the percentage, in most cases, is the same number as the totals. Therefore, the"per cent" and "total" columns are usually combined.

\begin{enumerate}
\item \textsuperscript{13} Wm. L. Hughes, The Administration of Health and Physical Education for Men in Colleges and Universities, (New York: Teachers College, Columbia, 1932), p. 5-6.
\item \textsuperscript{14} Turner, Principles of Health Education, p. 12.
\item \textsuperscript{15} Department of Superintendence: 4th Yearbook, (Washington: National Educational Association, 1928), p. 221.
\end{enumerate}
For the most part, the percentages are on a basis of the entire number of schools participating in the study. However, in some cases, when several points may be checked by one school the total per cent is over 100, as the percentage is figured on the basis of how many schools checked the individual item. On the other hand, some totals will not add up to 100% because of indefinite replies, and questions left unanswered. Notations will be made later when these tables are presented.

**SUMMARY**

Expert opinion is agreed that health is one of the most important, if not the most important field in education. The high school health program has been neglected more than that of the elementary school.

The main purpose of this study is to determine the status of the Health Program in the high schools of Montana. There are no previous studies on this subject, although several more general ones have been made.

This study depends primarily on the questionnaire technique, although professional literature, and official records are referred to. A total of one hundred high schools, including all five first class high schools, participated in this survey.
CHAPTER II.

ORGANIZATION AND ADMINISTRATION OF THE HEALTH PROGRAM.

Definite Organization of Health and Physical Education Program.

If anything definite is to be accomplished in school health it is of primary importance that the department be definitely organized. It matters not whether this program which promotes the health of the students is called the Physical Education Program, Hygienic Program, Health and Physical Education Program, General Health Program, Health Education Program, or by any similar name, because the value lies in the functions rather than in the name. Every Health program must therefore be analyzed before its value can be ascertained.

Health education must be considered valuable by the school administrator before it can hope to succeed. Turner claims that one can tell whether or not a school has a definite program by talking with the principal and not looking at the classroom work at all.16 The teacher cannot be expected to produce an adequate health program unless she has the support of the administrators and supervisors.

Table II shows very clearly that the majority of the

high schools of Montana do not have a definite health and physical education program. It is also very noticeable that the smaller schools are far behind the first class and county high schools. This is probably due to the fact that the smaller schools are more limited in trained instructors, facilities, and time. Slaght, in his study on Supervision in Third Class High Schools found that the principals were overloaded with class work and extra-curricular affairs, leaving little time for the organization and supervision of a Health program.17

### TABLE II.

Montana High Schools Having Definite Health and Physical Education Programs.

<table>
<thead>
<tr>
<th>Classes of schools:</th>
<th>Yes</th>
<th>No</th>
<th>Blank or Indefinite</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First class</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Second class</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Third class</td>
<td>10</td>
<td>35</td>
<td>14</td>
<td>59</td>
</tr>
<tr>
<td>County high school</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total and percentage</td>
<td>22</td>
<td>57</td>
<td>21</td>
<td>100</td>
</tr>
</tbody>
</table>

Over twenty per cent of the administrators were indefinite in their answers. Some of these school men wrote "we have physical education", or "all of the boys play"

---

basketball." These answers are probably indicative of the health work done in many of the schools that were indefinite in their answers. Basketball or track was the extent of their health and physical education program.

Three first class schools answered "yes," but one added the comment that "it wasn't a very good program." Several other schools in answering "yes" qualified their answers by remarking that they considered the program very inadequate. Table III shows the situation in regard to the comparative value placed on Health and Physical Education in Montana. The inquiry form asked this question: "Is physical education part of your general health program, or is health work a part of your physical education program?" High schools including health work as a part of another program would naturally attach less importance to this item than they would if health was a program in itself. The answers were fairly evenly divided, although a slightly larger number indicated that physical education is part of their general health program.

Authorities differ as to whether Physical Education should be part of the General Health program, or health should be part of the Physical Education program. In some cases, physical education is thought of as the broader field, the goal of which should not only be health, but also some recreational and social value. Some advocates of
physical education go so far as to say that health is not an aim of the program, but that it comes about only incidentally. J. F. Williams in "The Organization and Administration of Physical Education" claims that "health is a by-product of physical education." 18

TABLE III.

Relation between Health and Physical Education in Montana High Schools

<table>
<thead>
<tr>
<th>Type of School</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health program includes phy. ed.</td>
<td>2</td>
<td>9</td>
<td>17</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Phy. Ed. program includes Health</td>
<td>1</td>
<td>8</td>
<td>16</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Neither</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Both</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Blank or indefinite</td>
<td>1</td>
<td>7</td>
<td>16</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>25</td>
<td>59</td>
<td>11</td>
<td>100</td>
</tr>
</tbody>
</table>

"In another sense, health is a wider term than physical education. Only a part of the health program is given in the physical education department. The general aim, health, should pervade the entire school system. In addition to the physical education work, it includes these activities or features: medical examinations, physical examinations, the general work of the school nurse, the teaching of physiology and hygiene. . . . The departments of physical education and health are so closely related so that in a small school system the two are likely to be handled by one person. There is no reason why one person, if properly trained, cannot handle the two." 19

The large majority of authorities, including Turner, 20

Keene, Kelly and Knowlton, and such organizations as the Northwest Health Conference and the Child Health Association agree that the general Health Program should include physical education. However, as has been stated before, the name of the program is not as important as the aims or objectives.

Some Montana schools report that neither the Health nor Physical Education program is a part of the other. These administrators evidently have separate Physical Education and Health programs. This would be a bad situation, unless the two departments were coordinated by someone in authority. This condition is illustrated by this statement made by a visitor at one school:

"Could not recognize any organization for health work. Very efficient city supervisors give continuity to policies. Local situation suffers seriously because there has been no definite administrative delegation of responsibility for health data and their use. Nurse has certain records, physical education director has others. Psychological records and behavior studies are elusive; some in dean of girls' office. Employment records both in office of commercial teacher, and in office of nurse serving as vocational counselor for girls employed as domestics. Academic and attendance records in principal's office. Nobody sees all.

23. Northwest Conference, p. 62
24. Health Trends, p. 4-11.
these about any one student. This is the result to be expected from a scheme organized by specialists for specialists. Nobody sees the whole child."

A few principals marked the question "both." This would probably indicate that they thought these programs were part of each other.


The ordinary high school teacher is more of a specialist than the children have been accustomed to in the elementary grades. High school students have only a few classes from one teacher, and perhaps come in contact with as many as five or six different teachers during the year. This means that the high school teacher does not get to know the students as well as the elementary school teacher gets to know hers.

The health education of a child is therefore in the hands of many individuals in high school. If there is no director or coordinator or counsellor of Health, there is little chance that the program will be efficient. The physical education department may be doing the same work that the nurse is, or some other phase of health work may be neglected altogether, due to misunderstanding. Contrast that with this example of the work done with a health

"There is a health counsellor who coordinates all the work in health. She works with the doctor and nurse three hours of each week; she works with the home economics teacher and with her, checks trays for adequacy of lunches chosen (once a month); she sees to it that publicity on health matters is prepared by the journalism class and appears in the school paper; she stimulates and assists in the preparation of posters, demonstrations with the nurse; she sees that the doctors' recommendations are carried home; she makes contact with social agencies for remedial work which cannot be provided by parents..."26

The strongest conviction gained by the Child Health Association in their survey in 1925 was that a Health Counsellor, or the equivalent, was definitely needed in every high school. The above survey also recommended that this counsellor would not necessarily have a full time job, but that he should be a person well grounded in health work and one who would coordinate this important phase of education.27

By referring to Table IV we find Montana schools decidedly lacking in this respect. Only in large schools should a full time Director be employed, but in the smaller of the schools in this study, certainly one member of the faculty could act in this capacity.

27. Ibid., p. 19.
TABLE IV.
Number of Schools Reporting Certain Persons as Doing Health Work

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Physician</td>
<td>3</td>
<td>7</td>
<td>14</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Dentist</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Nurse</td>
<td>5</td>
<td>10</td>
<td>23</td>
<td>6</td>
<td>44</td>
</tr>
<tr>
<td>Mental hygienist</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Physical education teacher</td>
<td>5</td>
<td>13</td>
<td>21</td>
<td>7</td>
<td>46</td>
</tr>
<tr>
<td>Special Health teacher</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Classroom teacher</td>
<td>1</td>
<td>10</td>
<td>25</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Superintendent</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

It is evident that there are three persons who do most of the health work in the high school. They are the physical education teacher, the nurse, and the classroom teacher. The physician is checked by 27% of the schools reporting. The first class high schools report more persons doing health work than the smaller schools, although only one respondent reports a Mental Hygienist and one a Special Health teacher.

The 1932 study of Secondary Education by the Bureau of Education found practically the same facts. The persons doing most of the Health Work in these selected schools
were the physician, nurse, and physical education director. The Health Director, however, was fourth in the list, which shows that increasing importance is being given to this position in schools with efficient health programs.

All persons checked as doing health work in the school do not spend their full time in this work. Probably some individuals spend only a few hours every year, while others may devote practically all of their time to it. It is obvious, then, that it is necessary to know how many hours per year these individuals spend doing health work. Table V contains this data compiled from the questionnaire.

These data are incomplete, as some principals did not fill in the definite time spent by the persons they checked, or in some way stated to the effect that they did not know. The number of cases is therefore small, so that probably the findings are not significant. Medians are computed only when ten or more cases are involved.

The range in all cases is wide. For example, in the third class schools, one principal reports that the nurse spends four hours per year in high school, while another reports that she spends 540 hours per year. In the second class, one school has a nurse for 1080 hours, while another has a nurse for only six hours per year.

In the first class schools, some of the indefinite answers given instead of factual numbers were: "irregularly employed" or "when needed." In the second class, some
### Table A

The number of hours per year various individuals spend in doing health work in the High Schools of Montana.

<table>
<thead>
<tr>
<th>Grades of Schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Education</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>K-8</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>44</td>
</tr>
<tr>
<td>High School</td>
<td>15</td>
<td>45</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>72</td>
<td>97</td>
<td>216</td>
</tr>
</tbody>
</table>

The table above shows the number of hours spent in doing health work in High Schools of Montana, categorized by grades of schools. Each column represents a different grade level, and the total hours are calculated for each category.
schools indicated "clinic work." One school had a "full
time nurse at $80 per month." Others said that the em-
ployment "varies," "is irregular" or is "incidental." One
school man was very frank in stating that he "didn't know."
A very common comment made in regard to the school nurse
was that she came "once a year." Some indefinite answers
given by the county high schools were: "general survey
made by county nurses each fall"; "nurses examine twice a
year"; and they are employed "as cases require."

It is apparent that very few schools employ Mental
Hygienists or Special Health teachers, but this cannot be
expected in the majority of Montana high schools on ac-
count of the small enrollments.

Responsibility for Health work seems definitely to
fall on the shoulders of the Physical Education Instructor,
as he was checked the greatest number of times on Table IV.
Table V indicates that he spends most time in this work.
The median tabulated on the latter table shows 135 hours
per year, or considerably less than one hour per day.

The reason for the wide range in number of hours
might be due to different interpretations of what is meant
by "Health Work", although the writer emphasized and ex-
plained in the letter which accompanied the questionnaire
that he was not concerned with "physical education items,
such as routine gym work."
The writer is fully aware that what information this table shows is highly subjective, as memory was probably relied on in most cases. All of this data, however, supports the contention of Table I: There is no definite Health Program in the majority of Montana High Schools.

**Agencies Contributing Toward High School Health Program**

There are many agencies, at the present time, which contribute toward the Health program in Montana high schools, either by services or by financial aid. This inevitably leads to the decentralization of control, and usually a poor or unorganized program results. However, there is a tendency all over the country to put all health work under one administration, especially in state departments and in large cities. 28

The greatest competition for control seems to be between the schools and the Board of Health—either state or city.

"The placement of administrative control of school health supervision is debated warmly by those who favor board of health direction and those who prefer board of education jurisdiction. In general the former group maintains that the Board of Health is the municipal and state health authority and that school health programs are therefore part of their duties. The latter prefer Board of Education control because all school matters logically come under educational authorities. The practice in all except the largest cities is now, and has been since 1911, to favor control by the school

authorities in the proportion of about three to one."29

Some authorities favor a joint control between both the Board of Health and the Board of Education. A thorough-going cooperation between the two boards is emphasized in this case. The Report of the National Child Health Council makes these statements in regard to apportioning the health work between these two boards:

"The responsibility of the board of education for all educational work is clear, while the responsibility for the control of communicable diseases rests with the board of health (through the supervision of whomever it may delegate to take charge of the work) . . . .

"If school work is to be conducted efficiently the two boards must cooperate and any arrangement that is made for its conduct should be entered into only after they have jointly approved a written agreement clearly defining the basis for cooperation, and providing for centralized supervision of all phases of the program. . . .

"Where it is possible to find a person mutually agreeable to both boards, and qualified by training and ability to take charge of all phases of school health work, he should be appointed under the terms of the agreement of the kind mentioned in the preceding paragraph. Such a person should, in all cases, have the powers, privileges, and obligations of a member of the school staff, regardless of the source of salary or supervision."30

The National Survey of Secondary Education found that

29. Thomas Wood and High Rowell, Health Supervision and Medical Inspection of Schools, Philadelphia: W. B. Saunders, 1927, p. 41.
local agencies, either the local board of education or the
local board of health, contributed most to the Health
Program. Most of the schools surveyed were located in
cities, so they probably made effective use of the local
health facilities.

Table VI shows that the agencies contributing most
frequently to the High School Health program in Montana are
the local Board of Education, the Red Cross, the county,
and the Boards of Health, either state or local. These find-
ings correspond generally with the facts ascertained in
the National Survey, with two exceptions. The schools of
Montana are located for the most part in very small towns,
so that aid from the local board of health—if such exists
—is very slight. Most aid comes from the county or the
State Health Offices. Other aid has also come from the
Federal Emergency Relief Administration, and other state,
county, and relief agencies. This is a temporary source
of aid, and most of it will be withdrawn when the present
emergency is over.

The present survey shows that Montana High Schools
are delegating much authority to agencies outside the
school. This is indicated by the large number of schools
in which the Red Cross and County together contribute
almost twice as much as the board of education. This is

TABLE VI.
The Frequency with which Various Agencies Contribute
toward the Support of Health Work in the
High Schools of Montana

<table>
<thead>
<tr>
<th>Type of school</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local board of education</td>
<td>4</td>
<td>17</td>
<td>30</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>Red Cross</td>
<td>2</td>
<td>18</td>
<td>30</td>
<td>5</td>
<td>55</td>
</tr>
<tr>
<td>County</td>
<td>2</td>
<td>9</td>
<td>33</td>
<td>7</td>
<td>51</td>
</tr>
<tr>
<td>State board of health</td>
<td>3</td>
<td>6</td>
<td>18</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>F. E. R. A.</td>
<td>2</td>
<td>0</td>
<td>14</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>City board of health</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>State board of education</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Seal sale</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>P.-T. A.</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Service Clubs</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

not true in the first class schools where the local board of education is the outstanding contributor, but it is obviously a fact in the smaller districts. The agency that pays for the services doubtlessly controls them, so the administrator in the smaller schools probably has little check on most of the Health work done.

One county high school reports, "Our own staff, of its own initiative, contributes." This is a commendable practice during an emergency, but it is not very prevalent.

Amount Spent by Local Board of Education for High School Health Program.

The Report of the National Child Health Council states
that "in all cases the amount to be expended for the saving of life and the promotion of health should be compared with that spent for the saving of property, as shown by the budgets of the fire and police departments." The report goes on to say that a maximum budget for health work of $5.00 per student per year is now being exceeded by certain medium sized cities. This report was written in 1923, so perhaps many more schools exceed this figure at the present time.32

Keene estimates the cost of a complete School Health program in a city of 30,000 population as ranging from $5.61 to $7.00 per pupil per year.33

The data on Table VII show the small amount of money expended per pupil per year from regular school funds in the high schools of Montana. The median for the sixty-one schools reporting is exactly fifty cents. The second class schools and the county high schools show a median range of almost $1.00, but the cases involved are comparatively small, so too much significance should not be attached to the figures. The thirty-seven schools reporting in the third class show a median of $.375.

These facts agree with Table VI which shows that much of the funds for health work is acquired from

33. Keene, op. cit., p. 482.
**TABLE VII.**

Amount Spent per Pupil per Year for Health Purposes in Montana High Schools

<table>
<thead>
<tr>
<th>Class of school</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ .00-.24</td>
<td>1</td>
<td>17</td>
<td>2</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>.25-.49</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>.50-.74</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>.75-.99</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1.00-1.24</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1.25-1.49</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1.50-1.74</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1.75-1.99</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2.00-2.24</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.25-2.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.50-2.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.75-2.99</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.00-3.24</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.25-3.49</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5.50 and over</td>
<td>1</td>
<td>($)0</td>
<td>1(10)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>19</td>
<td>37</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

Median $1.66

*Median is not computed when number of cases is less than ten.

Many administrators give indefinite answers, or honestly state "I don't know." This also bears out the contention of Table I in that most high schools pay little attention to Health as a program. One second class district mentioned no sum, but commented that the work was carried on as an added duty for the regular teachers or as an extra-curricular activity. A county high school principal reported that no amount was spent "officially" for health, but that a goodly sum went for health purposes.

According to the State Financial Survey the total amount of money expended in 1933-34 for health service in high schools of the State of Montana was $2312.87, or
about 7½¢ per student.

Fire Drills

According to Keene, "the safety . . . of the building has a very definite relation to the health of the pupils in the school."34

TABLE VIII.

Regularity with which Fire Drills are Held.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Are fire drills held?</td>
<td>5</td>
</tr>
<tr>
<td>Regularly</td>
<td>2</td>
</tr>
<tr>
<td>Irregularly</td>
<td>3</td>
</tr>
</tbody>
</table>

TABLE VIIIa.

Frequency Table: Number of Fire Drills Held per Year.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>0-4</td>
</tr>
<tr>
<td></td>
<td>5-9</td>
</tr>
<tr>
<td></td>
<td>10-14</td>
</tr>
<tr>
<td></td>
<td>15-19</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
</tr>
<tr>
<td></td>
<td>30-34</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
</tr>
<tr>
<td></td>
<td>40-44</td>
</tr>
<tr>
<td></td>
<td>45-49</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
</tr>
<tr>
<td>Median</td>
<td>*</td>
</tr>
<tr>
<td>High</td>
<td>20</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
</tr>
<tr>
<td>Range</td>
<td>10</td>
</tr>
</tbody>
</table>

* Median not computed when number of cases is less than ten.

34. Keene, op. cit., p. 45.
As shown by Table VIII, seven schools report that they do not hold fire drills. This is a direct violation of the state law, quoted below:

"In all schools of the state, either public or private, in which 30 or more children are enrolled, it shall be the duty of the teacher or teachers therein employed to instruct the children under their immediate control and charge once each week during the school terms in 'fire drill' as hereinafter provided, except that in buildings occupied exclusively by high school students, drills may be held but twice each month."

"Any teacher who fails or refuses to instruct in said fire drill in the manner provided for shall upon conviction be fined not less than five or more than twenty-five dollars."

The majority of the schools that hold fire drills do so irregularly. This is a violation of the school laws, as quoted above.

The median number of fire drills held by Montana high schools during the year as indicated by Table VIII is 11.4. This is also a violation of the state law, which requires drills at least twice a month. Large school systems have slightly more drills per year than the smaller ones, although one small school reports 45 drills or an average of one and one half per week.

The holding of fire drills in schools is very infrequently discussed in modern literature on school health. The necessity is taken for granted. Rice, Conrad, and

35. School Laws of Montana, Chapter 84, Section 1071.
Fleming insert the following technique for conducting fire drills:

"It is a common legal requirement that fire drills be held in schools at regular intervals, usually once a month; it consequently becomes the administrator's duty to so organize and conduct these drills that the building may be emptied in a minimum time under varied conditions. The vice-principal charts the school and plans to distribute the students equally to the several exits. Directions are posted in a conspicuous place near the door of each classroom and students are instructed at the beginning of each term about the signal for the fire drill; the necessity of clearing the exits to prevent congestion; the avoidance of loitering on the way out. Drills should, of course, be organized for the auditorium, where the danger of panic is greatest, since the whole school population is gathered in a confined space. After several drills have been conducted successfully under routine conditions, it is a good practice to inform the students that in subsequent drills one or more stairways or exits will be blocked off from use, as might actually happen in the event of fire, and that teachers and students who would normally use these means of egress, will have to depend upon their own initiative in finding other ways out of the building. After each drill a note should be inserted in the school paper, informing the school of the time consumed in clearing the building and making suggestions for improvement."  

As to value of fire-escapes, a Bureau of Education Bulletin, quoted in "Health for School Children," states:

"Fire escapes should not be found on school buildings designed for the highest degree of safety unless they are planned as enclosed stairways and the pupils required to use them for regular passage at least once a day. Experience has proven that the ordinary fire escape will be forgotten.

in the panic and confusion attending a fire, and that the pupils, unless thoroughly acquainted with them as a means of exit through frequent use, will by habit, resort to the stairways. The stairways and exits that the pupils are in the habit of using a number of times each day during the school year always prove to be the most efficient means of egress in any emergency. If the stairways are properly proportioned to the number of occupants and located with respect to the rapid and orderly dismissal of the students, the introduction of so-called fire escapes is likely to prove a menace rather than a further means of safety. 37

An interesting question arises as to whether we are emphasizing the importance of fire drills to too great an extent. As far as the writer has been able to discover there has been no recent study or facts compiled on the number of fires in schoolhouses during school hours, and the loss or injury to life that resulted.

The only available fact found on this subject was a table of accidental deaths, published in Health Education by the Joint Committee. Out of 5377 accidental deaths in 1927, 52, or less than 1/5, were caused by conflagration. 38

With the present lack of facts in regard to the value of fire drills, these administrators are possibly determining the frequency of the drills by the type of building in which school is held. The National Survey

of Secondary Education found that about the same percentage hold fire drill (95%). This survey also found that 70% of these schools hold them regularly, but that this percentage is smaller in the small schools.39

Cooperation with Parents

One of the most difficult problems in the administration of the high school health program is gaining the cooperation of the parents. Parents, as a rule, seem to be little interested in health work.

"Regarded from any but a conventional point of view, the fact seems strange that while the raising of first rate bullocks is an occupation on which educated men willingly bestow much time and thought, the bringing up of fine human beings is an occupation tacitly voted unworthy of their attention. Mammies who have been taught little but languages, music and other accomplishments, are held competent regulators of the food, clothing and exercise of children. Meanwhile the fathers read books and periodicals, all with the view of discovering how to fatten prize pigs."40

The school officer who is probably most responsible for the cooperation between the home and the school is the nurse. She should make every effort to persuade parents to modify home conditions if they are undesirable, and to secure remedy and correction for any defects in the child that are found to exist. Although consultation at school is highly desirable, this is rarely possible; so, as a general rule, nothing can take the place

of home visits. The nurse should also aid in the education of the parents in regard to communicable diseases, etc. Coercion is rarely necessary, but if it is, it should come through the principal or superintendent. 41

Other ways of obtaining cooperation from the parents are by health talks given at community meetings, or by health items published in the local or school papers. Home health projects are valuable in interesting parents in the school health program. Sending home reports of school examinations usually accomplishes very little unless more follow-up work is done.

The education of the adult must accompany that of the child if full benefit is to be derived from the training of the latter. Thousands of parents err through ignorance and would welcome information. The danger of too technical information should be avoided, as the average parent cannot understand it. 42

The per cent of schools claiming cooperation with the home in promoting health activities is seventy-eight, according to Table IX. The most popular method of cooperation is "sending home reports of the medical examination." The school most likely figures in this work only incidentally, as the majority of nurses, upon whom such a

### TABLE IX.

**Schools Cooperating with the Home in Promoting Health among Pupils.**

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools claiming cooperation (yes)</td>
<td>4</td>
<td>19</td>
<td>46</td>
<td>9</td>
<td>78</td>
</tr>
<tr>
<td>Schools not claiming cooperation (no)</td>
<td>1</td>
<td>6</td>
<td>13</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td><strong>Methods of cooperation:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By home projects</td>
<td>1</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>By sending home reports of medical exams</td>
<td>2</td>
<td>14</td>
<td>38</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Home visits by nurse</td>
<td>2</td>
<td>7</td>
<td>19</td>
<td>7</td>
<td>33</td>
</tr>
<tr>
<td>Health talks at community meeting</td>
<td>2</td>
<td>6</td>
<td>18</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Health items in newspapers (local or sch.)</td>
<td>2</td>
<td>7</td>
<td>22</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>Health instruction to parents</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Duty usually falls, are hired by, are responsible to, outside agencies.

The number of schools checking "health items in local and school newspapers" is surprising. Much good work seems to be done in that field by all classes of schools.

**Health Records.**

The keeping of accurate, up-to-date records of the health condition of every student in the high schools is a very necessary and much neglected part of the school health program.

Each child should have a separate card containing all the health data concerning this individual. The file should be kept in an accessible place.
"Each child should be provided with an individual record card, which should accompany him throughout his school career. So far as the health features are concerned, this card should indicate... the child's physical defects, treatments secured, cures or improvements effected, exclusions from and readmittance to school. It should also include such facts regarding the child's home conditions as will enable the school to handle his case intelligently. ..."

In addition to these individual record cards, of which there are many varieties printed by publishing houses, some provision should be made for recording health statistics that will summarize the health work done in the school or the condition of the students' health over a period of time. Such a record should enable a superintendent, board or community to appraise the value of this health work.

"... These statistics should show the number and kinds of defects discovered and corrected and the number which remained uncorrected; number of exclusions from school; time lost by school children on account of exclusions for communicable diseases and also on account of other illness; number of home visits; number of inspections; number of examinations and re-examinations; percentage of classified defects to total enrollment; number of defects found in various school buildings and various matters ... Careless reports and data which are inadequately analyzed and badly interpreted are a waste of time and discredit the work."  

Table X indicates that sixty-nine per cent of the schools reporting in this survey assert that they keep

43. Health for School Children, p. 48-49.
44. Ibid., p. 49.
TABLE X.

Health Records Kept in Montana High Schools

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete card file, including record of phys. exam., contagious diseases, etc.</td>
<td>4</td>
<td>6</td>
<td>13</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Record of Physical examination only</td>
<td>0</td>
<td>9</td>
<td>18</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Record on contagious diseases only</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Other data</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>17</td>
<td>38</td>
<td>10</td>
<td>69</td>
</tr>
</tbody>
</table>

TABLE XI.

Data on Health Records.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who uses them?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No one</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Superintendent</td>
<td>4</td>
<td>14</td>
<td>34</td>
<td>6</td>
<td>57</td>
</tr>
<tr>
<td>Teachers</td>
<td>2</td>
<td>11</td>
<td>20</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>Students</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Parents</td>
<td>0</td>
<td>3</td>
<td>19</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Nurse</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Health officer</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>What use is made of them?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Some</td>
<td>3</td>
<td>15</td>
<td>31</td>
<td>6</td>
<td>54</td>
</tr>
<tr>
<td>Much</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

health records of some sort. The majority of this group keep only the record of the physical examination. In most cases, this is probably the record left by the nurse following her visit to the school. This fact was pointed out by comments on several of the inquiry sheets. Twenty-eight per cent, however, claim to keep a complete health record of each student, including the physical examination.
and a life history of the child with reference to disease. Other data kept record of were: physical education cards, weight and height charts, and vaccination records.

Health records are obviously of no use if all this data is acquired, recorded, and then allowed to collect dust in some remote file in the principal's office. The amount of use to which these data are put in the schools of Montana is shown in Table XI. Most of the schools report that "some" use is made of them. The superintendent is the person who makes most use of the reports. This is probably as it should be if he acts as the Health Director or if there is no regular Health Director. Teachers and parents also appear to use these facts to a lesser degree. The third class schools checked "parents" more often than the other divisions. The nurse is not reported making use of these records as she should, even considering the small number of nurses available. Six schools report that "no one" uses these reports. In considering the amount of follow-up work done, most likely very few of the schools make extended use of these records.

Summary

A definite program is considered vital to the success of any undertaking. Only twenty-two per cent of Montana high schools have a definite health program. Authorities differ in the comparative value placed on Health and
Physical Education. Montana schools differ also. Most
health educators, however, would make physical education
of the health program.

The need of a Health Director or Counselor in every
school was the strongest conviction gained by the Child
Health Association in their 1925 survey. Montana schools
are decidedly lacking in this respect. Although most of
them are too small for full time directors, the principal
or some other trained faculty member could assume the
duties. The physical education teacher, the nurse, and the
classroom teacher do most of the health work in the high
schools of Montana. The median of the time spent per year
by these individuals is: physical education teacher, 135
hours; nurse, 30 hours; and classroom teacher, 75 hours.

The majority of authorities recognize that the school
should control its Health program, but there are many plans
in effect of joint control with the board of health. In
Montana we find that outside agencies contribute more than
the local board of education toward the Health program.
The greatest outside contributors are the Red Cross and the
County.

The recommended amount to be spent on the Health
program should be about $5.00 per pupil per year. Montana
high schools spend $.50 from regular funds, according to
the estimate of the principals reporting.
Many Montana schools violate the law in regard to fire drills. Seven per cent of the schools reporting do not have them, 52% have them irregularly, and the median number held, per year, is 11.4. The value of fire drills has been very infrequently discussed by authorities.

Schools should cooperate with parents in regard to health matters. Seventy-eight per cent of Montana schools report that they do. The most frequent method used to secure this cooperation is the sending of physical examination reports home with the pupil.

Records are of vital importance if use is to be made of the information. Only 28% of Montana schools keep complete records. They are usually used "some" by the superintendent.
CHAPTER III

HEALTH OF TEACHERS

Health Standards in Employing and Re-electing Teachers

Among personal qualifications, one of the most important to be considered by a school board or superintendent in hiring a teacher, is her health. It is obvious that a well teacher will do better classroom work than a sick one. A "happy teacher" will create an atmosphere of optimism and enthusiasm among the students, so that good results are much more easily obtained.

The health of the teacher has a definite relation to economy as well as efficiency. Small communities might save the cost of the rapid "turnover" of teachers if they would pay more attention to the latter's health. Dublin found that teachers were absent on an average of between six and ten days per year.45

Health certificates are usually required in order to obtain a state teaching certificate. However, the examinations which precede this certification are very rarely complete and in some cases lacking entirely. When the writer was awarded a certificate, the health requirement was met by having a Board of Health officer ask him a few questions, sign his name, and it was all over in two or three minutes.

45. Terman and Almack, op. cit., p. 446.
Probably these examinations are useful in screening out the totally unfit candidate, but it is obvious that border-line cases may pass through and begin their teaching career under a disadvantage to themselves and their pupils.

"... A thorough health examination, accompanied by advice on the removal of health handicaps, should come at an early stage in the training of candidates for the teaching profession; the examiner should be given full power to exclude unpromising candidates in accordance with well-defined standards."

The School Law of Montana in regard to the requirements for a Health Certificate, reads as follows:

"No person is eligible to teach in any public school in this state . . . who has not secured . . . a satisfactory health certificate from a reputable physician."

This is an example of a well-meaning law which does not go far enough, nor is it specific enough to do much good. According to Keene:

"Such employment should always be preceded by a careful physical examination made, not by a physician employed by the teacher, but by the physician employed by the board of education, whose duty is fundamentally to the board of education rather than to the candidate for a position."

Table XII shows an interesting situation in regard to the schools in Montana, in view of the fact that this state requires a health certificate before a teaching

47. Montana School Laws, Chapter 147, Section 1083.
certificate will be issued. Naturally then, the employment of all Montana teachers is dependent in part on their ability to measure up to certain health standards.

**TABLE XII.**

Schools Reporting That Employment of High School Teachers is in Part Dependent on their Ability To Measure up To Certain Health Standards.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (dependent on health)</td>
<td>2</td>
<td>17</td>
<td>34</td>
<td>8</td>
<td>70</td>
</tr>
<tr>
<td>No (not dependent on health)</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

A total of fourteen principals stated that employment was not so dependent.

The Office of Education Survey of 1932 found that in less than half the states the respondents were unanimous in replying "yes" or "no" to questions concerning definite state law. These, moreover, were schools reported to be outstanding in health work. 49 This revealed a definite lack of knowledge on the part of many principals of many schools over the country. The present survey probably does not reveal such a lack of knowledge, but this fact was inserted to show that such things do exist, even in the best schools.

The National Survey of Secondary Education points out that in 70% of these selected schools, the employment of

49. Ibid., p. 11.
Not only should teachers be required to meet definite health standards when applying for positions in high school, but during their period of service, frequent check-ups should take place to see that they remain in good health. Rice, Conrad and Fleming say:

"... These [health] defects are matters of importance not only at the time of employment, but also throughout the teacher's career; it is of course clear that the teacher is protected quite as much as is the student by all requirements for periodic health examinations, since the teacher whose health is impaired ought to know about it and be able to remedy it while there is yet time. Yet there is a strong feeling among teachers against such periodic examinations, based on the fear that the physician's findings may cause them to lose their positions."  

According to Table XIII, only a few high schools place their teachers on probation in regard to their health condition. Evidently some attention is paid to health when a teacher is hired; and then it is forgotten, unless, of course, the condition is so bad that it shows up clearly in the teacher's work.

In those schools where attention is paid to the teacher's health after employment, the superintendent's estimate is used in the majority of systems to determine the health condition. Very few even require a doctor's

TABLE XIII.

Schools Placing the Teacher on Probation in Regard to Health Condition

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Per cent and total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
<td>9</td>
<td>20</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>10</td>
<td>31</td>
<td>8</td>
<td>52</td>
</tr>
</tbody>
</table>

How This Health Condition is Determined:

- Teacher's statement: 0 1 5 0 6
- Supt.'s estimate: 0 4 17 1 22
- Doctor's certificate: 0 4 5 0 9
- Health preceding year: 0 0 1 0 1

certificate, which would be valuable only if the issuance of this certificate were based on a complete physical examination.

Many principals commented that "no cases had ever arisen" where the health of the teacher was involved. Others report that nothing was done unless the "effect was very apparent."

Health Examination for Teachers

In Montana, a little over 10% of the schools reporting require a physical examination when teachers are employed, and less than half that number examine the teachers periodically afterwards. Several administrators comment that no examination is given except when their certificate is issued. As has been stated before, in the large majority of cases, this signing of a health certificate could hardly be called an examination. There is also the possibility that it was given many years ago, which would make it useless now.
Only one school, out of the eleven reporting to require health examinations when teachers are employed, according to Table XIV, do not require the teacher to pay for the examination. This doubtlessly means that the teacher will employ her own physician, which is not regarded as good practice, as shown above by a quotation from Keene.

TABLE XIV.

Health Examinations for Teachers

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Per cent and total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools requiring physical examinations when teacher is employed</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Teachers examined periodically afterwards</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Teachers paying for these examinations</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

We find that many high schools which try to check up on physical condition of their teachers, ask them to obtain a doctor's certificate. As has been stated above, this is also a very superficial method unless the doctor is required to make a complete physical examination of the teacher in question. In the National Survey of Secondary Education, 70% of the schools claimed that employment was dependent on certain health standards, but only 42% required a health examination. Twelve per cent of these schools required examinations periodically afterwards. These examinations were usually required (1) at the end of
three years of teaching; (2) when returning from sabbatical leave; (3) after more than ten days' illness; or (4) at the pleasure of the administration. 52

Other Health Services for Teachers

Fifty-nine schools, out of the 100 reporting in this study state that some type of sick leave is allowed at either full or part pay. Of this number, about two-thirds allow full pay and one-third part pay. In some cases, however, the same schools are included in both groups, as they designated a certain number of days at full pay and the remainder at part pay. This is shown on Table XV.

TABLE XV.

Sick Leave Allowed at Full or Part Pay.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Per cent and total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full pay</td>
<td>3</td>
<td>12</td>
<td>23</td>
<td>7</td>
<td>45</td>
</tr>
<tr>
<td>Part pay</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>

Table XVI shows that the medians for all the high schools allowing sick leave is five days on full pay. The number of schools reporting the number of days on part pay is too small to be significant, but the amount of time seems to be longer. Several interesting plans were described in this connection; one school allows sick leave on part pay for the first three years, and on full pay after three years.

TABLE XVI.
Number of Days Allowed in Sick Leave for Teachers

FULL PAY

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of schools</td>
<td>5</td>
<td>12</td>
<td>21</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Median</td>
<td>*</td>
<td>5</td>
<td>5</td>
<td>*</td>
<td>5</td>
</tr>
<tr>
<td>Highest</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Lowest</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Range</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>

PART PAY

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of schools</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Median</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Highest</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Lowest</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Range</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>19</td>
</tr>
</tbody>
</table>

*Median is not computed when the cases number less than ten.

Several schools do not limit the number of days of sick leave, probably deciding on the merits of each case. Another school limits the sick leave to one week each year, and to two weeks accumulated during the number of years the teacher is employed.

Sonneman investigated the sick leave plans in 128 Montana elementary and high schools. He found that 58 percent report that the teacher receives full salary. This study, however, does not show how many of this group had to pay their substitutes, so this figure is meaningless. He finds that the median days absent on full pay are from five to nine.
Sonneman states that existing evidence indicates that teachers are absent very little no matter whether they have sick leave or not. This shows a good attitude.53

Sick leave is one of the more important teacher health problems. Most of the larger cities of the country grant full pay but in many of the smaller cities and rural schools the teacher must stand the full loss. The following data were obtained by a survey made by the National Education Association, and quoted in Terman and Almack:

"... 72% make some allowance, and 28% make none. The least liberal of the group grant pay for three days, and the more liberal up to ten days. The three-day allowance will, under ordinary conditions take care of about a third of the cases; the larger allowance will take care of about two-thirds." 54

TABLE XVII.

Other Methods by which Schools Assist Teachers in Keeping in Good Health.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total &amp; percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide for teachers' rest room</td>
<td>4</td>
<td>16</td>
<td>4</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Requiring teachers to be immunized</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Granting leaves of absence</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Protecting teachers from excessive class and pupil load</td>
<td>2</td>
<td>13</td>
<td>30</td>
<td>10</td>
<td>55</td>
</tr>
<tr>
<td>Keeping regular hours</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

As to other methods by which schools assist teachers

54. Terman and Almack, op. cit., p. 463.
in keeping good health (Table XVII), the one claimed by most of the schools is "protecting teachers from excessive class and pupil load." This "protection" can be questioned, as recent studies point to the fact that during the last few years of economic stress, class and pupil load have risen considerably. Probably these administrators intend to convey the idea that they are doing as much as possible under existing conditions. However, one school stated in connection with this that they were planning on adding two more teachers to the staff.

A rest room for teachers is provided in many schools. A greater per cent of the larger schools provide this convenience than do the smaller. One administrator assists in this problem by requiring the teachers to "keep regular hours." This is commendable if given and accepted in the right spirit, but the writer has personally known cases where this request was twisted into interference in private affairs.

Only two schools reporting require that the teachers be immunized against communicable diseases. The specific diseases reported were: scarlet fever, diphtheria, and typhoid fever.

One principal inserts as answer to the same question, "What else is done to keep the teachers in good health?": "Teachers pay their own substitute at $3.00 per day." This
is interesting, but it is difficult to see how such a plan would promote the health of teachers, except possibly in a negative direction.

There have been valuable contributions made to the field of improvement of the health of the teacher, particularly by Dublin, Carrothers, and Hart. Sick leaves are unsatisfactory in most schools, and many teachers are without this protection entirely. Only in the most progressive schools is medical care and attention given teachers. Other phases of this problem which have not been adjusted as yet are teaching load, the management of refractory students, and meeting the sometimes conflicting demands made by supervisors and principals. Other teacher health problems that need attention are recreation schedules, tenure, salary schedule, and appointment,—all of which have a mental, if not a physical effect on the teacher.

According to Terman and Almack, the following matters should be considered in any problem endeavoring to raise the health standards of teachers:

1. The installation of an adequate system of health records.
2. Satisfactory sick leave benefits.
3. Thorough physical examinations, health supervision, and health guidance.
4. Good physical conditions for teachers.

55. Terman and Almack, op. cit., p. 444.
56. Ibid., p. 452.
57. Ibid., p. 448.
58. Ibid., p. 461.
5. A rest and recreation program.
6. The elimination of unnecessary causes for worry and unrest. 59

The National Survey of Secondary Education found that over half of these schools participating try to promote the health of their teachers. In 23% of the schools the faculty is organized for recreational purposes. One school in South Carolina described a practice that contributed to both educational and health growth. For three weeks before the beginning of school in the fall, the teachers participate in a summer camp. The aim is to weave health into the entire school program. 60

Summary

Numerous studies have been made by Dublin, Carrothers and others investigating the health of teachers. They found that it was a good plan to keep teachers in good health from both the efficiency and the economic viewpoints.

Health certificates are required in Montana, but the ease with which such a certificate is acquired, prevents the exclusion of many unhealthful individuals from our schools.

Fourteen per cent of Montana educators report that employment of teachers in their systems is not dependent on

59. Ibid., p. 462.
60. Monograph No. 28, pp. 24-25.
their ability to measure up to certain health standards. This may or may not indicate lack of knowledge of the state law. It is possible that these school men referred to certain health entrance standards set up by the local schools, but many of these answers were most likely due to the lack of knowledge or memory of how Montana teachers are certified. Probably the little effort necessary to gain such a certificate—which these men must have obtained at some time or other—was not sufficient to warrant remembering the incident.

Only 30% of Montana high schools place the teacher on probation in regard to her health condition. Most of these schools use the "superintendent's estimate" to determine the teacher's physical condition.

About 10% of Montana schools require physical examinations when teachers are employed and practically all of these teachers must pay for their own examination.

This study found that the teachers in 45% of Montana schools may be absent a median of five days at full pay on sick leave. A lesser number of schools allow sick leave at part pay. Fifty-five per cent claim to attempt to keep teachers in good health by protection from a too heavy class or pupil load.
CHAPTER IV.
HEALTH SERVICES IN HIGH SCHOOL

Before beginning the discussion of health services in the high schools, it would be well to clarify the scope of this program by defining the limits of the field. Dr. Edna W. Bailey gives the following definition:

"The definition of the purpose of health service is ascertaining the health status of the pupils, giving this information to parents and teachers concerned, adjusting the pupils' program to his health limitations, when necessary . . . . The minimum responsibility of the school is to see that the student is no worse off for his school experience . . . ." 61

Wood and Rowell would include more in the nature of follow-up or remedial work in the aims of Health supervision or service. 62 The difference lies in the question of how far the school should go in correcting defects. This will be discussed in a later section.

A. HEALTH EXAMINATIONS

Until recent times, the chief purpose of health service was to control communicable diseases, and to discover defects and deformities in students. There is a marked tendency now to regard the health examination as the first step in the health program, to harmonize the work of the school and the home, and to bring about an

improvement in the health of the students.\textsuperscript{63}

High Schools Providing Health Examinations

Health examinations are taken for granted in well-planned high school health programs. The National Survey of Secondary Education does not mention any schools which did not administer health examinations of some kind. The survey made by the American Child Association reports that only one school out of fifty-three state definitely that no examinations are given. However, both of these were selected groups.\textsuperscript{64}

\textbf{TABLE XVIII.}

High Schools Providing Health Examinations for Students

\begin{tabular}{|c|c|c|c|c|}
\hline
Classes of schools & I & II & III & IV & Total and per cent \\
\hline
Providing examinations & 5 & 15 & 37 & 9 & 66 \\
Qualified answer & 0 & 3 & 12 & 0 & 15 \\
Not providing exams & 0 & 7 & 9 & 2 & 18 \\
\hline
\end{tabular}

\textbf{TABLE XVIIIa.}

High Schools Requiring Health Examinations

\begin{tabular}{|c|c|c|c|c|}
\hline
Classes of schools & I & II & III & IV & Total and per cent \\
\hline
Required & 2 & 9 & 34 & 6 & 51 \\
Qualified answer & 0 & 2 & 3 & 3 & 8 \\
Not required & 2 & 5 & 13 & 0 & 20 \\
\hline
\end{tabular}

The present survey reports that 18\% of the schools definitely do not give their students health examinations.

\textsuperscript{63} Health Trends, p. 25.
\textsuperscript{64} Monograph No. 28, p. 26.
in any form. (Table XVIII). Of the other group, 15% qualified their answers, by stating that they did not give examinations to the entire student body. Nearly all the schools qualifying their answers stated that examinations were given to athletes only. There were also many explanations written in, commenting that the examining had been done by either a Red Cross or County nurse, especially in the smaller schools. This supports the contention that most of the examining reported here was done by an individual not paid by or directly connected with the school.

One school man reports that the "chairman of the board of trustees is the health officer, so he checks the pupils carefully." This is one way of solving the problem. Another principal reports that examinations are given only "When absolutely necessary in sports, etc." On the other hand, the next administrator deplores the lack of thoroughness of the examination given by the County nurse.

One county high school states that, although no examination is given, the eyesight of the children is watched carefully. The teacher reports any cases of poor vision, and a doctor is recommended. This is a commendable practice but entirely subjective, and would hardly compare with a complete health examination. Another county high school administrator terms the examination in his school as "spasmodic."
Are Health Examinations Compulsory?

The national survey reports that most of the schools in this selected group compel students to be examined for health. The present Montana survey also reports this fact in Table XVIIIa. Some answers are qualified, however: "Not compulsory for Christian Scientists--no objections from others;" "compulsory unless written excuse from parent is presented." This seems to be the consensus of statements and may be true in many cases answered "yes." Probably no child is forced to take this examination if the parents object. There is no state law to this effect.

Frequency of Health Examinations

Most authorities are in agreement that students should be examined when they enter school and yearly thereafter. Those found to be below par should be examined more frequently. The National Survey of Secondary Education found that the requirement reported by the largest number of schools was that the students should be examined once a year.

The present study agrees with the National Survey. According to Table XIX, the majority of schools have health examinations given once a year. The second largest number of schools check the item "once during school career."

65. Monograph No. 28, p. 27.
67. Health for School Children, p. 43.
68. Monograph No. 28, p. 27.
TABLE XII.

Frequency with which Student Health Examinations are Given.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than twice a year</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Twice a year</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Once a year</td>
<td>2</td>
<td>11</td>
<td>29</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>Once during school career</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

Items Included in Health Examination

Table XX shows that the six items included in the large majority of Montana high school health examination are: (1) eyes, (2) throat, (3) teeth, (4) ears, (5) height, (6) weight. The nose, heart and lungs were tested to a lesser degree. Color, nails, hernia, thyroid, and body odor were named by administrators only once.

The National Survey reports that the items mentioned most frequently, in rank by frequency, were: Eyes, throat, teeth, ears, nose, heart, and lungs. These three items were included by a large minority of the schools: Orthopedic condition; speech defects; and nervous condition.

"Examinations should include at least hearing and vision tests, relation of weight to height and age, examination of teeth, nose, throat, heart, lungs, spine, posture, feet, nervous condition, mental and emotional states, glandular condition and general tone. To insure that nothing is overlooked, standard forms, approved and recognized by authorities, should be used. Whenever possible, examinations should be made with the child stripped, (or clothed in a slip cover), his parents being present." 69

69. Health for School Children, p. 44.
TABLE XX.

Items Included in Health Examination.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>4</td>
<td>15</td>
<td>47</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Throat</td>
<td>4</td>
<td>16</td>
<td>46</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Teeth</td>
<td>4</td>
<td>17</td>
<td>43</td>
<td>8</td>
<td>77</td>
</tr>
<tr>
<td>Ears</td>
<td>4</td>
<td>15</td>
<td>41</td>
<td>8</td>
<td>68</td>
</tr>
<tr>
<td>Nose</td>
<td>4</td>
<td>10</td>
<td>36</td>
<td>6</td>
<td>56</td>
</tr>
<tr>
<td>Heart</td>
<td>4</td>
<td>15</td>
<td>24</td>
<td>6</td>
<td>49</td>
</tr>
<tr>
<td>Lungs</td>
<td>5</td>
<td>14</td>
<td>20</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>Weight</td>
<td>5</td>
<td>15</td>
<td>43</td>
<td>9</td>
<td>77</td>
</tr>
<tr>
<td>Height</td>
<td>5</td>
<td>14</td>
<td>47</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Posture</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Nails</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Skin</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Feet</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Health Examinations for Athletes

Most authorities are agreed that no pupil in high school should be allowed to participate in any strenuous kind of sports such as football, basketball, or track unless this student has first been examined and pronounced fit immediately before the playing season begins. 70

In the conduct of any athletic program, the first concern should be the health of the individuals participating. Dr. McCullough, Superintendent of the Pennsylvania State Tuberculosis Sanitarium, makes the following statement: "To permit tubercular or seriously infected children to engage in competitive athletics may be little short of

murder." 71 The same should apply to students with defective heart or lungs.

Montana high schools make a very poor showing in this respect. Only 53 schools out of the 100 reporting give all athletes physical examinations before they allow them to enter athletic contests. The third class schools are the greatest offenders. This does not mean, necessarily, that athletes in almost half the schools do not have examinations at all. Some may be examined with the other students in the middle of the year, or every two years, or once during their school career. However, this examination may not include the inspection of the heart and lungs. In 47% of our Montana high schools, no effort is made to check up on the physical condition of its athletes immediately before the season starts. These data are shown on Table XXI.

**TABLE XXI**

Schools Requiring Physical Examination for Athletes.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools requiring examination</td>
<td>5</td>
<td>19</td>
<td>19</td>
<td>10</td>
<td>53</td>
</tr>
</tbody>
</table>

B. FOLLOW-UP WORK AND OTHER HEALTH SERVICES.

Before going into the types of follow-up work offered

in Montana high schools, the writer will discuss the two general trends of thought in regard to how much corrective or remedial work should be offered by the school authorities.

One view is exemplified by Dr. Edna W. Bailey. She makes the following statement:

"While the health program of the secondary school must carry an important share of the general community responsibility for the well-being of youth, it is quite as necessary to mark off its definite limits as to becoming conscious of its obligations. The secondary school is an educational institution, not a philanthropic or reformatory one. Its goal is encouragement of rational action, based on principles, not propaganda.

"As a matter of fundamental policy, the high school is not concerned with remedial measures, or 'corrective' classes in any field. As a means of meeting an emergency or caring for an intolerable situation, such an effort may be necessary and proper; but it must always be regarded as emergency only and every effort made to turn such enterprises over to community agencies, designed primarily for relief, not educational service. The trend of school health service in the last ten years has been definitely in this direction." 72

The opposite view is taken by Wood and Rowell. They state that the contents of the Health and Physical Education program, among other things, should consist of:

"Correction of remedial health defects, including not only the fitting of glasses for defective vision, the removal of diseased tonsils and adenoids, prophylactic cleaning of the teeth, and corrective dental treatment; but also special measures for the correction of malnutrition, and

individual gymnastics for the correction of orthopedic defects."73

This attitude is taken by the majority of authorities. Kincaid believes that if the children will not get this remedial work unless the schools offer it, then the schools should offer it.74

Recent Social Trends, the report of the President's Research Committee in 1933, predicts that the work of government (school) agencies will probably grow, and become dominant unless private medical institutions are established that will provide comprehensive service at a reasonable cost.75

What Follow-up Work is Done.

A health examination is of no value unless it is considered only as an inquiry into a condition. A second step must take place which will maintain or improve that condition.

In the survey made by the American Child Association, only eight per cent of the schools definitely did not make any use of the examination. However, another twenty-five per cent were very vague in regard to this use. Therefore

73. Wood and Rowell, op. cit., p. 35.
only approximately 67% of these selected schools do make
definite use of the findings. 76

In the Office of Education Survey, 60% of the schools
report that public health clinics are available to pupils
for treatment. 77 No mention is made as to whether the
school or some other agency offers it.

<table>
<thead>
<tr>
<th>TABLE XXII</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Items in Health Examinations for Which Remedial or</strong></td>
</tr>
<tr>
<td><strong>Corrective Work is Offered.</strong></td>
</tr>
<tr>
<td><strong>Classes of</strong></td>
</tr>
<tr>
<td><strong>schools</strong></td>
</tr>
<tr>
<td>Eyes</td>
</tr>
<tr>
<td>Throat</td>
</tr>
<tr>
<td>Teeth</td>
</tr>
<tr>
<td>Ears</td>
</tr>
<tr>
<td>Nose</td>
</tr>
<tr>
<td>Heart</td>
</tr>
<tr>
<td>Lungs</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Feet</td>
</tr>
</tbody>
</table>

In Montana, according to Table XXII, very little
follow-up work is done. Out of seventy-four schools test-
ing the eyes, only twenty-two offer remedial work if de-
fects are found. Still less work is done for throat and
teeth defects, and any other remedial work is negligible.
Weight was checked in 75% of the schools, but only seven
per cent try to correct any condition causing it.

76. Health Trends, p. 29;
77. Monograph No. 23, p. 28.
Persons Doing Follow-Up Work

The persons doing follow-up work to remedy the defects found by the examination depends on whether the school itself does this work or whether it depends on outside agencies.

TABLE XXIII

Persons Doing Follow-Up Work to Remedy Defects Found by Examination.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>School physician or dentist</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>County physician or dentist</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>City physician or dentist</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>School nurse</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>County nurse</td>
<td>0</td>
<td>5</td>
<td>17</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Family doctor</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Superintendent</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Table XXIII shows that the county is doing most of the follow-up work in Montana. The County Physician and dentist and the county nurse are the persons by whom most of this work is done. The amount of remedial work done by the county seems to be in inverse proportion to the size of the school. Very little county work is done in first class schools. In the second class schools the work is fairly evenly divided, while in schools of the third class a great majority of the work is done by county officers. The small amount of work done by the family doctor is striking. Schools possibly may not have a complete check on this work, but probably in many cases, if the work is not done by some
public organization, it is not done at all.

Some of the other persons mentioned in this connection were: physical education teachers, classroom teachers, Indian Field doctors, and Kiwanis Clubs.

**Information to Parents on Child's Condition**

The first procedure employed for getting health defects corrected, according to the American Child Association Survey, is the notification of the parents. The next step is to have a conference with the parents. 78

Notification of the parents probably accounts for very few corrections of defects, so conferences are much more desirable. Some schools send notices to the parents after the examinations have taken place asking them to come to the school for a conference. Other schools report conferences with parents through visits of various staff members, such as the nurse, teacher or advisors. In the National Survey, 90% of the schools inform the parents of these defects. 79

In the majority of Montana schools the parents are notified of defects in their children when these examinations are given, according to Table XXIV. This information probably does not materially assist in the remedy of the defects unless a conference follows.

---

78. *Health Trends*, p. 32.
TABLE XXIV.

Additional Data on Follow-Up Work

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents informed of defects</td>
<td>4</td>
<td>18</td>
<td>48</td>
<td>7</td>
<td>77</td>
</tr>
<tr>
<td>Corrective physical education offered</td>
<td>4</td>
<td>1</td>
<td>12</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Free clinic (other than school) for poor students</td>
<td>1</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Reduced price clinic (school)</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Corrective Physical Exercise

The opportunity still exists in many schools to make definite use of the findings of the examination by special physical activities. Corrective physical education is offered in over 75% of the largest schools in the National Survey. However, the percentages for schools enrolling 300 or less is 26%. 80

Only 20% of the high schools of Montana offer corrective physical education (Table XXIV).

Free and Reduced Price Clinics

Free or reduced price clinics should be offered by the school or some other public agency to care for those defective children whose parents are either unwilling or unable to pay for the service of a private physician or dentist. As has been described above, authorities differ in opinion as to what agency should provide this service.

80. Monograph No. 28, p. 28.
However, if local communities do not provide clinics for the needy children, the opportunity for the school to provide the same is increased accordingly. The National Survey reports that 60% of those schools have public health clinics available to students. 81

This is not true in Montana, however. Only 18% of the schools report that other than school clinics are available, and 10% of the schools maintain a reduced price clinic, according to Table XXIV. This means that clinics, as described above, are available to less than 30% of Montana high school students.

The Indians seem to be better off than their less fortunate white brothers in this respect. Many superintendents of schools on reservations state that free clinical service is provided for Indians only. The same holds true for examinations given by Indian Field Doctors and service rendered by Indian Hospitals.

Some schoolmen also mentioned that the free clinics reported were county clinics, and available only to children whose parents were "on the relief." That fact would eliminate many high school students from this service.

**Lunches for High School Students**

Terman and Almack believe that the first duty of the

81. Monograph No. 28, p. 28.
school is to feed its hungry pupils. The expression that we often hear, that the school has no concern with the child except to educate him, is not true. We hear the cry of "socialism," but providing free lunches is no more socialist than providing free buildings, playgrounds, pencils, etc. School feeding does not undermine parental responsibility, because we have found that public interest in children nearly always awakens parental interest.  

Most authorities are agreed that hot school lunches should be provided for all pupils, if they are unable to get home easily during the noon intermission. Whenever the financial condition of the parents requires it, this lunch should be provided at public expense. Practically all European nations are far ahead of the United States in providing this necessary health service.

In Montana, according to Table XXV, only 31% of the schools reporting serve hot noon lunches to any of the students. A large majority of these schools serve all the students—at least, all may participate if they so desire. This was indicated by comments and explanations made by the respondents. These comments also indicate that many students do not take advantage of the lunches. According to several

64. Terman and Almack, op. cit., p. 114.
TABLE XXV.

High Schools Serving Hot Noon Lunches

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools serving</td>
<td>2</td>
<td>7</td>
<td>20</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>To all students</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>To needy students</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Financed by students</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Financed by school</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Financed by other means</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Full lunch</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>One hot dish</td>
<td>0</td>
<td>5</td>
<td>16</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Served entire year</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Served winter months</td>
<td>0</td>
<td>4</td>
<td>11</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Free milk</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

Statements from smaller schools, these lunches are mainly or even entirely for the benefit of the children coming on busses or in cars from country homes. Evidently then, lunches in the smaller schools are not for the purpose of providing food for the malnourished, unless only incidentally.

About half of these lunches are financed by the students themselves, and a little less than half by the school. The rest are paid for by various methods, such as Women's clubs, Community clubs, P.-T. A., F. E. R. A., Federal Indian Relief, etc.

The majority of these schools serve only one hot dish. The child probably brings sandwiches, etc., from home and the hot dish served is usually soup, cocoa or a vegetable.

Most Montana schools serve lunch only a few months during the winter. This is probably when the child needs a hot lunch most, but malnourishment exists during all
months of the year.

Free milk is furnished in less than 10% of Montana high schools. This may include milk used for the hot noon lunches.

One school's administrator stated that he noticed on Mondays many of the children ate a larger lunch at noon than they did on other days of the week. He suggested that it might be due to the fact that the child did not get much nourishing food at home over the week-end. Another principal stated that parents had noticed that when children were served soup or some other hot dish at noon, they would not bring home half their cold lunch, as they did when no hot dish was served.

The National Survey reports that 277 of 460 schools reporting serve hot noon lunches. 85

Immunization of Students

One way to prevent disease is to have the body in good health so it will be able to resist any onslaught of the disease germs. However, a health program that tends to fight all diseases in this manner is insufficient for the needs of modern society. Consequently, it is necessary to prevent the spread of infection by extending the protection afforded by various types of immunization.

There are two kinds of immunity: active and passive.

85. Monograph No. 28, p. 42.
It is common knowledge that if one has certain communicable diseases and recovers, he will not have that disease again, for the blood builds up a lasting immunity to that toxin. This fact is made use of in immunization against small-pox, typhoid fever, and diphtheria. Passive immunity is brought about by introducing into the blood certain antitoxic bodies, which will temporarily immunize the patient against certain diseases. This type is used in both diphtheria and tetanus. The diphtheria toxin-antitoxin is really a combination of the two methods.\textsuperscript{86}

The increase in mortality due to certain communicable respiratory diseases has been very noticeable during the last few years. Between 1910 and 1920, all age groups showed a decrease in mortality, except age group 20 to 29, which increased .6%, and age group 15 to 19 (high school group) which increased over 10%. Three respiratory diseases, tuberculosis, pneumonia, and diphtheria, caused 40% of the deaths. Adding influenza and the common cold, which cause from one-third to one-half of all absences due to illness among high school students, we have quite a problem of mortality due to respiratory diseases.\textsuperscript{87}

Immunization is considered by authorities as a valuable means of controlling communicable diseases, and many schools

\textsuperscript{86} Health Education, pp. 43-44.
\textsuperscript{87} Bailey, op. cit., p. 19
include it as part of their health program. However, other schools leave this responsibility to the board of health.

In Montana, schools report that they furnish free immunization from diphtheria and small-pox most frequently. However, the percentage of schools is only 18 and 12 respectively.

**TABLE XXVI.**

Schools Providing Free Immunization for Various Diseases.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Small-pox</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Scarlet fever</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other diseases</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

**Tuberculin Survey in Montana**

It is very evident from all the latest statistics that the disease causing the greatest mortality among children of high school age is "the great white plague"—tuberculosis. Table XXVII shows that tuberculosis leads even accidents in Washington State as a cause of deaths in the age group from 15-19 years. Table XXVIII indicates that tuberculosis is the leading disease causing deaths in

88. Monograph No. 29, p. 94.
89. Kelly and Knowlton, op. cit., p. 16.
TABLE XXVII.

Death Causes in Washington #
Total Deaths, Leading Causes, 1929-1933
Age 15-19 years

<table>
<thead>
<tr>
<th>Cause</th>
<th>Deaths</th>
<th>Pneumonia</th>
<th>79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis</td>
<td>340</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidents</td>
<td>262</td>
<td></td>
<td>53</td>
</tr>
<tr>
<td>Auto accidents</td>
<td>158</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>Heart</td>
<td>120</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Appendicitis</td>
<td>110</td>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>

Total deaths, all causes, 1718
(Males, 1,000--Females, 718)

TABLE XXVIII.

Deaths from Tuberculosis and other Leading Causes *
Montana 1932

<table>
<thead>
<tr>
<th>Age groups</th>
<th>All causes</th>
<th>Heart disease</th>
<th>Nephritis</th>
<th>Pneumonia</th>
<th>Tuberculosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ages</td>
<td>5,294</td>
<td>1,065</td>
<td>442</td>
<td>348</td>
<td>348</td>
</tr>
<tr>
<td>Under 5</td>
<td>616</td>
<td>2</td>
<td>44</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>5 - 9</td>
<td>94</td>
<td>4</td>
<td>17</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>10-14</td>
<td>85</td>
<td>6</td>
<td>26</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>15-19</td>
<td>158</td>
<td>6</td>
<td>45</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>20-24</td>
<td>160</td>
<td>7</td>
<td>37</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>25-29</td>
<td>124</td>
<td>14</td>
<td>16</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

# From Northwest Conference Report, pp. 57-58.
* From unpublished mortality tables compiled by Montana Tuberculosis Association.

the same age group in 1932 in the State of Montana. Nora L. Reynolds states that "the age group in which the high school students fall is a critical one from the standpoint of health, and there is evidence that, for tuberculosis workers in particular, this age represents a weak point in
The Tuberculin Skin Test has been used a great deal in determining whether or not the germs are in the body. This harmless test, developed by Robert Koch, has been approved by the White House Conference on Child Health and Protection.

"The test is made by placing a drop of liquid called tuberculin within the upper surface layer of the skin either by a tiny scratch or by injection. This is harmless. If the spot becomes red and slightly swollen within two or three days it means that live tuberculosis germs are somewhere in the body. The small red reaction area disappears and leaves no scar or other effects."  

If the test is positive, then the child's chest should be x-rayed to be sure that no harm has been done to the lungs.

The Montana Tuberculosis Association has done much work in this connection during the past year. This association is very anxious that the Tuberculin-X-ray Survey be made in every high school in the state. To date the test has been given in eleven high schools of the state: Two first class, four second class, one third class, and four county high schools. They make a practice of following up the reactors in an effort to find unsuspected cases of tuberculosis in the homes. If funds were available, this test would be given in every high school in the state.

92. The Tuberculin Test, (Helena: Montana Tuberculosis Association).
When the tuberculin test was given to the students of Butte High School, it was found that 32.5% reacted positively. Of the 500 x-rayed, only 15 showed an entirely negative reaction to tuberculosis in all details.93

Summary

Only 66% of the Montana high schools reporting in this study definitely state that general health examinations are given to their students. National surveys show practically 100% and most authorities are agreed as to their value. Most Montana schools give these examinations once a year, which is a recommended practice. These examinations are usually compulsory, although exceptions are made. The items usually included are: eyes, throat, teeth, ears, weight, height, and lungs.

A decidedly poor showing is made by Montana high schools in giving examinations to athletes. Forty-seven percent are negligent in this respect,—the greatest offenders being the small schools.

An examination is of little use unless the defects discovered are corrected. Montana does very little of this follow-up work. Eye, teeth, and throat defects are corrected most frequently, the percentages being 22, 13, and 10, respectively. In most cases this work is done by a

county officer,—not by the school.

Parents are usually notified of the results of these examinations. This is done by message, and not by conference, in most cases. Montana high schools offer very little corrective physical education. Less than 50% of the schools report that free or reduced price clinics are available to students, and of these, many are only for children whose parents are on relief. Indians seem to be assisted more than white people.

Noon lunches are served in 31% of the schools. Large schools usually have cafeterias available, while most of the small schools serve one hot dish, financed by the school and limited to winter months.

The increase in mortality due to communicable respiratory diseases in the high school age group, has enhanced the value of immunization. Only about 15% of Montana schools provide immunization from any communicable disease.

Tuberculosis causes the greatest mortality during the ages of fifteen to nineteen. The Montana Tuberculosis Association has conducted clinics in eleven high schools of the state. The Tuberculin test was administered and many of the reactors tested by x-ray.
CHAPTER V.

HEALTH EDUCATION

Montana Course of Study

The Course of Study for Physical Education and Health is adhered to by forty-one per cent of the schools reporting in this survey. (Table XXIX.) This percentage includes many answers such as "partly," "not closely," "not definitely," "somewhat," or other answers to the same effect. However, one principal states that he follows his course of study closely.

The Montana High School Course of Study is admittedly "not designed as a detailed course of study nor is it a theoretical treatise of physical education and health. It does aim, however, to assist the principal or teacher in the organization of a course of study, and it also attempts to present in plain language the new viewpoint which is gaining ground in the field of physical education."94 This manual gives many liberal objectives and states the present health status clearly. A rather detailed plan of administering a good physical education program follows. Short paragraphs are included on "Corrective Exercises" and "Hygiene Teaching", but no explicit directions as to how to teach it are presented.

The idea is conveyed that Montana schools do not carry on much of this work. Practically all of the objectives in the manual stress health, but the latter part is only a course of study in Physical Education. A summary of a "Tentative Health Program for Secondary Schools," issued by the Department of Education of Pennsylvania, and published in Monograph Number twenty-eight of the National Survey of Secondary Education, contains much material for the organization of a Health program.95 The recent Course of Study for Junior High Schools emphasizes Health Education more, although only Physical Education is given in the outline of study.96

The National Survey reports that the courses of study used in most schools were made either by the city school system or the state department. In the smaller schools, the State Department outline is used almost entirely.97

TABLE XXIX.

<table>
<thead>
<tr>
<th>Schools Reporting to Follow the Montana High School Course of Study in Health and Physical Education.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes of schools</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Schools</td>
</tr>
</tbody>
</table>

According to Table XXX, the individuals giving most of the Health Instruction in Montana High Schools are the Physical Education and the Science teachers. The Home

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95. Monograph No. 28, p. 46.
### Persons Giving Definite Health Instruction

**TABLE XXX.**

**Persons Giving Definite Health Instruction in Montana High Schools**

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total &amp; per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special health teacher</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>School nurse</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>County nurse</td>
<td>1</td>
<td>2</td>
<td>23</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>School physician</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>County physician</td>
<td>0</td>
<td>1</td>
<td>13</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Physical education teacher</td>
<td>5</td>
<td>13</td>
<td>37</td>
<td>7</td>
<td>62</td>
</tr>
<tr>
<td>Science teacher</td>
<td>2</td>
<td>12</td>
<td>52</td>
<td>7</td>
<td>53</td>
</tr>
<tr>
<td>Social science teacher</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Home economics teacher</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Coach (athletic)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dean of girls</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Economics teacher is listed separately by 24 schools, which makes all Science teachers the ones listed most frequently. The County Nurse is one of the important health teachers in third class high schools; but, considering the fact that she does not spend a great deal of time in the average school, it is doubtful if much instruction could be given. However, the nurse instructs definite health classes in a few schools. It is interesting to note that none of the larger schools report a special health teacher.

The Report of the Summarizer of the Northwest Conference on High School and College Hygiene states that it should be the responsibility of each member of the secondary school faculty to be familiar with all problems of health instruction. These teachers should be able to meet all ordinary health situations, be able to answer any ordinary
question on health, and have a sufficient knowledge of health instruction to enable them to incorporate into their classes any of the health material assigned them by the director.98

This conference also agreed that the definite health course should be taught by a specially trained instructor. He not only should be able to teach the formal and technical materials in health instruction, but should also be responsible for the coordination of the other health material presented in the school in other classes.99

The National Survey found a great diversity in the persons giving definite health instruction. These schools used the physical education instructor most frequently. Teachers of science rank second, followed by the school nurse and physician.100

Definite Health Courses

In compiling the data for the definite health courses taught in Montana High Schools, the writer first asked this question of the respondent: "Is health offered as a definite course in your high school?" Eleven schools answered this question in the affirmative, but three replies had to be eliminated, as the next question—in asking details about the course,—showed that these respondents had either Biology

100. Monograph No. 28, p. 31.
or Physical Education in mind. These subjects are not usually considered as definite courses in health—at least as they are ordinarily taught—so they were not tabulated with the others. Table XXXI shows the data found in regard to the remaining eight courses. Physiology may be questioned as to being strictly a course in health, but at least the major portion of such a course deals with health problems. These courses are distributed through all classes of schools fairly evenly, as there seems to be no difference in the amount of this type of health instruction offered in small or large high schools.

The course itself is well standardized, except in name, and perhaps contents. It is usually a regular semester subject, earning ½ credit, meeting five times a week, and not required. Two schools report health courses given by the Red Cross or County Nurse to girls only.

Definite instruction in Health may be given in a special course, or it may be given as parts of other courses. Most authorities are in agreement that both of these direct and indirect methods should be used.101

The National Survey shows that definite health courses are offered and required in 42% of those schools reporting. However, only 25% require this subject in schools of one

TABLE XXXI.

Definite Health Courses Offered
in Montana High Schools

<table>
<thead>
<tr>
<th>Names of courses</th>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Periods per week</th>
<th>Weeks per year</th>
<th>Credit</th>
<th>Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiology</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Physiology &amp; Hygiene</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Health Essentials</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Health Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>5</td>
<td>18</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Home Hygiene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>1</td>
<td>36</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Home Hygiene &amp; First Aid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>36</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Home Nursing, Care of sick. &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Aid #</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For girls only given by Red Cross.
§ For girls only given by County Nurse.

hundred or less enrollment, but 60% require it in the largest group of schools.102

Other Classes Giving Definite Health Instruction

As has been pointed out before, health instruction should be taught in connection with other courses as well as by the direct method involving a special course in health. The condition in Montana is indicated by Table XXXII. Sixty-eight per cent of the schools list Biology as the course in which health instruction is given most frequently. Physical education is mentioned fifty-seven times. The other courses are reported much less frequently. Seven third class schools

102. Monograph No. 22, p. 93.
report that health instruction is given in all classes.

TABLE XXXII.

Other Courses in which Some Health Instruction is Given.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Per cent and total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All classes</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Physical Education</td>
<td>5</td>
<td>9</td>
<td>37</td>
<td>8</td>
<td>59</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>21</td>
<td>35</td>
<td>9</td>
<td>68</td>
</tr>
<tr>
<td>General Science</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Social Science</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Home Economics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

The National Survey found that many courses were listed. The ones mentioned most frequently were Physical Education, General Science, Home Economics, Biology and Civics. The Survey made in Secondary Schools by the American Child Health Association found that the following courses were reported most frequently: Home Economics, General Science, Biology, Chemistry, Physics, and Social Science.

Special Classes for the Defectives or Handicapped.

Schools nowadays attempt to (1) discover any unusual children among its pupils; and (2) to provide such children with guidance and instruction that is suitable to their abilities. Such groups are usually called "special classes." The most common ones are (1) classes for the mentally incompetent; (2) fresh air classes; (3) sight-saving classes; and (4) defective speech classes.

103. Monograph No. 28, p. 93.
104. Health Trends, p. 66.
105. Wood and Rowell, p. 290.
Only one of the one hundred schools reporting in this survey offer any special classes for the defective or handicapped. This was a class in Defective Speech.

A survey made in Montana by the Committee for the Study of the Exceptional Child in 1934, found that 14% of the students tested were partially blind, and over 2% were speech defectives. Many other kinds of defectives were found which numbered over one per cent of our school population. This seems to indicate that there is a great need for special classes in Montana high schools.

The National Survey found that 14% of the schools reporting have special classes.106

Care of Adolescent Girls

In Montana high schools, advice is given to adolescent girls in about 54% of the schools (Table XXXIII). This advice is usually rendered by the nurse. Only two schools report that the physical education director is responsible for this information. One administrator states that he attempted to give such advice but met with unsatisfactory results.

Most authorities delegate the responsibility for advice in sex hygiene to the physical education instructor. The necessity of excusing girls from strenuous activity

106. Monograph No. 28, p. 41.
TABLE XXXIII.

Adolescent Girls

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Per cent and total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No advice given</td>
<td>2</td>
<td>8</td>
<td>26</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Advice given</td>
<td>3</td>
<td>14</td>
<td>30</td>
<td>7</td>
<td>54</td>
</tr>
</tbody>
</table>

during the menstrual period offers an excellent opportunity for discussing basic sexual needs and peculiarities. As these requests come as individual ones, the instructor is offered a peculiar advantage as a chance for private discussion without the misunderstanding and embarrassment which usually is present when such instruction is given to groups. It also avoids criticism which sometimes comes from parents in regard to group instruction in these matters.107

Measuring the Results of Health Instruction

There are few, if any, standardized tests that will measure health attitudes, habits, knowledge, and status of high school students. The most widely recognized piece of work along this line was done by the American Child Health Association in 1928, and written up by Raymond Franzen.108 This study, however, was limited to fifth and sixth grade elementary students.

The number of "Health Knowledge" tests is slowly increasing, but schools should be more interested in the results of teaching health, not the results of teaching about

health. The measurement of health habits and attitudes at the present time must largely be limited to the subjective type. Information regarding the health status of the individual, is usually obtained by comparing the physical examination records of two groups, or comparing the examination records of each group, with the record of its previous inspection. 109

**TABLE XXXIV.**

Attempts to Measure the Results of Health Education

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools reporting &quot;yes&quot;</td>
<td>2</td>
<td>5</td>
<td>18</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>By frequent examination</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>By check-ups on defects remedied</td>
<td>1</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>By individual charts</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>By tests and records</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>By periodic weighing and measuring</td>
<td>1</td>
<td>5</td>
<td>13</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>By daily inspection of hands, etc.</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

As shown by Table XXXIV, 29% of the high schools in this study attempt to measure the results of health instruction. Most of the methods reported, however, indicate that the health status of the student is the type of measurement attempted most frequently. This is not surprising, on account of the lack of tests for health attitudes and habits, as has been stated above. In regard to measuring health

information, probably most of the reports were based on the assumption that regular course examinations would satisfy this point of inquiry.

The method of measuring health status most generally checked in this survey was "periodic weighing and measuring." "Frequent check-ups on defects remedied" was mentioned fifteen times. Probably this type of measurement affects very few cases, considering the number of students who do not have defects corrected.

The National Survey shows that in almost 75% of these schools no attempt is made to measure the results of health instruction. The methods of measurement used most frequently are: frequent physical examination; individual charts and follow-up work; tests and records; periodic weighing and measuring.110

Other Health Education Activities

The following health activities were fostered in the schools reporting to the National Survey: Health posters, health plays and programs, physical safety measures, hikes and excursions, health contests and awards, health clubs, 4-H clubs, and the modern health crusade. The Junior high schools mention these activities most frequently with the exception of the 4-H clubs, which seemed most prevalent in

110. Monograph No. 28, pp. 45-46.
the smaller four year high schools. Other health activities mentioned were Camp Fire Girls and the sale of Christmas seals.

Table XXXV indicates other instructional activities that are fostered by Montana High Schools. Health Posters are checked by 38% of the schools. These may be sketches, illustrations, quotations, and other material posted on a special health bulletin board. The work was probably done by students in Health classes, or in some other related courses such as Art or Science. Hikes and excursions are fostered by 33% of the schools reporting. Many groups, such as Scouts, Science classes, 4-H clubs, and Physical Education groups may sponsor this activity. Other types of activity most frequently found in these schools are health plays and programs, and health lectures. These are probably parts of assembly programs.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health posters</td>
<td>4</td>
<td>7</td>
<td>25</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>Health plays and programs</td>
<td>3</td>
<td>3</td>
<td>11</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>Hikes and excursions</td>
<td>1</td>
<td>5</td>
<td>21</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td>Health contests</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Health clubs</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Health lectures</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>

**Summary**

Forty-two per cent of Montana high schools reporting

111. Monograph No. 28, pp. 57-58.
follow the state course of study in health and physical education. The manual itself contains very little material that could be used in developing a good health program, however.

The physical education instructor and the science teacher give most of the health instruction in Montana high schools. Less than 10% of these schools offer a definite course in health. Biology is the science in which most health instruction is given.

Only one school reports a special class for defectives, this being a "speech defective" class. A late survey found that 14% of all students in Montana were partially blind. This indicates that probably more attention should be given to this part of the program. Advice to adolescent girls is given in 54% of the schools.

Twenty-nine per cent of the Montana high schools report that they attempt to measure the results of health instruction. The most frequent method mentioned is periodic weighing and measuring.

Such health activities as "posters" and "hikes" are fostered by about 35% of Montana high schools.
CHAPTER VI.

Hindrances and Aids to High School Health Programs

Hindrances to Health Programs

The greatest hindrances to the high school health program in the schools reporting in this study are brought about by local conditions. This is shown in Table XXXVI.

<table>
<thead>
<tr>
<th>Hindrances to Health Program</th>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of cooperation from parents</td>
<td></td>
<td>0</td>
<td>10</td>
<td>15</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Lack of facilities at school</td>
<td></td>
<td>1</td>
<td>20</td>
<td>36</td>
<td>11</td>
<td>68</td>
</tr>
<tr>
<td>Lack of cooperation from outside agencies</td>
<td></td>
<td>0</td>
<td>3</td>
<td>10</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Poor organization</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

The lack of facilities at school was mentioned the greatest number of times. This probably includes such items as: Lack of funds; lack of teachers; or lack of equipment. This difficulty is felt in all departments in high school, to a more or less degree. It is probably due, in part, to retrenchments necessary during the last few years of economic stress.

Twenty-six per cent of the schools report a lack of cooperation from the parents. This is not surprising, considering the little effort expended to gain cooperation as shown in Table IX, above. Lack of cooperation from other
outside agencies was also noted by 17% of the schools. Detailed examples are quoted later in this chapter.

As we note the many existing deficiencies in the present status of the health program in Montana, it would be well to discuss some of the reasons why more is not done to develop a commendable health program in our secondary schools.

According to Bailey:

"The greatest hindrance to the development of a high school health program is the inertia of the teaching body, due to the fact that their interest and training are centered in the academic achievement of their pupils. For this they are prepared; by this they are judged. When a community assesses its secondary program in terms of health and good social adjustment of high school graduates, rather than in terms of their ability to pass college entrance examinations and survive the freshman year, we shall see a prompt right-about-face in the high school attitude about a health program. Of all our local non-profit institutions, high schools respond most quickly to local demands. The first step in encouraging a high school health program is to build a community demand for it, and appreciation of it."

The same author lists as a second hindrance, the juvenility, "goody-goodyness" of the health books that are offered in high school as texts. The difference between the teaching of health in the elementary grades and in high school should be recognized to a much greater extent. In high schools there should be much more self-direction or self-responsibility on the part of the students. There

should be more emphasis on social, rather than personal, values. The program should be adjusted to the increased rationalizing ability of the student; and the goal should be made long range, as well as immediate.¹¹³

Dr. L. P. Jacks, quoted by Rule in the Journal of Health and Physical Education, makes the following statement:

"There are too many of our educators who seem precluded as by a law of nature from conceiving that anything can possibly be educational unless it is mediated by a book, accepted in a sitting position and tested by an examination."¹¹⁴

The above statement is probably greatly exaggerated, but nevertheless, it may apply in some cases. Moreover, the ignorance of school authorities in regard to school law concerning the health program has been illustrated in the National Survey of Education quoted above.

There is a lack of interest in health matters on the part of many of our high school students. Dr. Larson, president of the Montana Tuberculosis Association, reports that when the Mantoux Tuberculosis test was offered to the students in Butte High School, 48% of these students were not interested in having a physical examination and taking the tuberculin test.

¹¹⁴ Rule, op. cit., p. 5.
Wood and Rowell claim that there is not enough of a "get-together" spirit between business organization, social clubs, welfare organizations, and public agencies. These associations should all band together for the best interests of child health.115

In the National Survey of Secondary Education, 113 schools reported that local conditions proved a hindrance to health activities. The conditions reported most frequently were: lack of facilities at school, lack of cooperation by parents, ignorance and superstition of parents, and lack of funds. These respondents intended to convey that the success of the health program not only depended upon the attitude of the school authorities, but also upon the attitude of the parents and the home conditions of the students.116 This same condition was found prevalent in Montana.

It is very evident that the present difficult economic situation has had a noticeable effect on the results of the present and the National Survey. As indicated above, many answers in both cases claim poverty, unemployment, lack of funds, lack of food and clothing. This naturally causes home conditions to be less healthful, and detracts from the ability of the home to support a school health program. For

this reason health work has been curtailed as one of the "frills and fads" of education. This seems unwise when the need of such a program is definitely greater now than in normal times. 117

Aids of the High School Health Program

The aids in establishing an efficient health program in high schools are usually the converse of the hindrances listed above. Local condition, especially parental cooperation and sufficient funds and facilities are generally outstanding.

TABLE XXXVII.

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation from parents</td>
<td>0</td>
<td>3</td>
<td>18</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Cooperation from outside agencies</td>
<td>1</td>
<td>7</td>
<td>14</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Good home conditions</td>
<td>0</td>
<td>2</td>
<td>12</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Good facilities at school</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

In Montana, the greatest aids to the health program are evenly divided between "cooperation from parents" and "from outside agencies." Some cases of lack of cooperation in the cases of outside agencies, will be noted in the next section. Good facilities at school receives the lowest number of votes, so that corresponds with the information

117. Monograph No. 28, pp. 61-62.
on Table XXXVI, which indicates that the lack of school facilities is the greatest hindrance.

The National Survey reports that a few more schools state that local conditions are favorable toward health than those who say the opposite. This is a promising condition.\(^{118}\)

**Most Needed Improvement in Health Programs**

Table XXXVIII shows a summary of what, in the opinions of the administrators reporting, are the most needed changes for improving the health program in Montana high schools.

"More funds" was mentioned most frequently by the educators. The result of this factor is shown in a previous section where the median amount spent per year for health by the local board of education is only fifty cents per pupil. Another closely related factor checked frequently was "larger staff." "Better organization of the work" was also considered a desired improvement. Other changes mentioned most frequently were: "More follow-up work," "better facilities" and "more health examinations."

Below are quoted the most interesting ideas suggested by principals in response to the request for same on the inquiry sheet:

1. "A health program is not hard to organize and put

\(^{118}\) Monograph No. 29, p. 61.
TABLE XXXVIII

Recommended Changes

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>More funds</td>
<td>1</td>
<td>6</td>
<td>11</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>More education and cooperation from parents</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Better cooperation from county</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Better facilities at school</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>More health examinations</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Better health instruction</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>More follow-up work</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Cooperation from Red Cross</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cooperation from State Department</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Cooperation from school board</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Better organization of program</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Larger staff</td>
<td>1</td>
<td>3</td>
<td>14</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Compulsory program</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>More physical education</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>More Home Economics</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Better health records</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>County or district financial support</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Enlarged health program</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

into operation even if limited to teacher help, but how to secure quarantine after a case is sent home is our problem." This schoolman had reference to the fact that when children are sent home for scabies, lice, impetigo, or other communicable diseases, they are allowed to mingle in stores, theatres, and other public places with the school children after school hours. This indicates lack of cooperation of city and county
health authorities with the school.

2. "The program you outline is more than any ordinary school could possibly manage." This principal claims that the school is doing too many other things to work out a complete health program.

3. A schoolman from a first class high school writes that "we have the items for a very good health program, but the department is very poorly organized."

4. "Teachers should be better qualified to organize and carry on a health program giving less emphasis to athletics." This idea was suggested by several administrators.

5. "We have no doctor in town which makes it impossible to detect diseases until they are spread." Cases such as these are common. One solution would be a definite health program with instructors trained to recognize symptoms of the common diseases.

6. "I believe we need a workable and beneficial health program organized on a larger unit than our small school."

7. "Education of school boards and parents for cooperation and financial aid in carrying out a satisfactory program."

8. "Have urged health study with physical education. Inertia seems hard to overcome."

9. Another first class school reports: "The high school needs a full time school nurse. Regular health programs are carried out in all elementary schools but school nurse only
calls at high school in case of emergency."

10. "During the present epidemic of measles, it has been impossible to check the spread because of disagreement between the two city doctors. One, a licensed M. D., sends youngsters back to school after being out only two days, and occasionally with the rash still showing. The other doctor, also a licensed M. D., tries to keep them out seven days after the rash has disappeared. Consequently, the school has been entirely exposed to it by children coughing while they still were carrying the germs. This is the most obvious case of no cooperation."

Rogers makes the following statement:

"The great problem is one of leadership; that is, to find men and women capable of supervising and conducting the four phases of the school program—health service, health supervision, health education, and physical education. We must find people sympathetic with the whole program."

Special Features of Health Program in Montana High Schools

The additional features of health work, or any special study of health problems reported in this survey were very few in number. Evidently little has been done along this line.

The Montana Tuberculosis Association's Tuberculin Test was mentioned the greatest number of times. An "enlarged physical education program" and "increased time given to

Health instruction" in this program were also very frequently mentioned.

Other special features mentioned were: Health day, water in school tested, scarlet fever immunization, study of contagious diseases. It is evident that much of the items listed as "special features" are really only minimum essentials of a good high school health program.

**Principals' Estimate of Health Program**

Forty-nine per cent of the Montana high school administrators reporting in this survey estimate their health program as "poor." This is shown on Table XXXIX. Thirty per cent claim the program is "mediocre" or average, while only seven schools consider their health service and instruction as "good." If the judgment of these principals can be depended upon, the condition of the high school health program in this state is very unsatisfactory.

**TABLE XXXIX**

Principals' Estimate of their Health Program

<table>
<thead>
<tr>
<th>Classes of schools</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total and per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Mediocre</td>
<td>2</td>
<td>10</td>
<td>17</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Poor</td>
<td>3</td>
<td>9</td>
<td>31</td>
<td>6</td>
<td>49</td>
</tr>
</tbody>
</table>

The National Survey found that thirty-five per cent of the schools reporting consider their health program adequate, forty-two per cent think it is not, while the remainder did
not report. They also found that the work was more satisfactory in large schools and Junior High Schools than in any other type.

Summary

Authorities list the following hindrances to an efficient health program: (1) low value set on program by community, pupils, and educators themselves, (2) attempting to use same methods of teaching in high school as in elementary grades, (3) ignorance on the part of educators of health requirements and privileges of school and civil law, (4) lack of cooperation with other agencies, (5) lack of funds.

Montana schools report that the greatest hindrance to the health program is lack of facilities—including funds, teachers, and equipment. The greatest aids were cooperation from parents and from outside agencies. Many aids and hindrances are to be found in local conditions, according to the opinion of the principals.

Administrators of Montana think that the most needed improvement is more money. The outstanding health work reported is the Tuberculin Testing Program sponsored by the Montana Tuberculosis Association.

Forty-nine per cent of Montana school men estimate their health program as "poor," thirty per cent consider it

120. Monograph No. 28, pp. 63-64.
"average," while only seven per cent rate their program as "good." The majority of the administrators reporting in the National Survey also consider their program inadequate.
CHAPTER VII.
SUMMARY AND CONCLUSION

General Summary

The main purpose of this study was to ascertain the status of the Health Work in Montana High Schools.

Most of the data for this work were obtained by submitting questionnaires to all four-year Montana high schools. One hundred out of one hundred seventy-nine blanks were filled out and returned in time to be used in this study. Professional literature was studied to determine how these schools compare with others and with recognized standards. Literature of the Office of Education, the American Child Health Association, the National Tuberculosis Association was used a great deal. Wood, Keene, Turner, Terman and Almack, and Bailey were referred to most frequently.

Only 22% of the Montana high schools report a definite Health and Physical Education program.

The Physical Education instructor, the nurse, and the classroom teacher are reported doing most of the health work in high school. The time these individuals spend in this duty ranges from a median of 30 to 135 hours per year. There is a definite need for a Director of Health to coordinate the work of the Health staff.

The County and Red Cross contribute more to the high school Health programs than does the board of education.
according to this report. The danger here lies in the fact that the school loses control of these services as it allows them to be performed by an outside agency. The recommended amount to be spent on a health program is five dollars per pupil per year. Montana boards of education spend about fifty cents on the same basis.

Many Montana schools violate the state laws in regard to frequency and regularity of fire drills. This raises some interesting questions as to the value of fire drills. Do we know that students who have been trained by regular fire drills will react better during a real fire than those who have not been trained? A previous quotation from a Bureau of Education bulletin states that "so-called fire escapes are likely to prove a menace rather than a further means of safety," and it is a well-known fact that practically all small schools of more than one story use fire escapes for their fire drills. With our modern fire-proof and slow-burning buildings, rigid boiler and fire insurance inspections, perhaps the importance of fire drills is decreasing. However, drills may carry over some training toward general conduct at other public gatherings, in preventing panics. The only statistics coming to the writer's attention stated that less than one per cent of accidental deaths are due to all types of conflagration.

Seventy-eight per cent of Montana schools claim to cooperate with parents in regard to health matters, usually by
sending home reports of physical examinations.

Only twenty-eight per cent of the high schools reporting in this survey keep complete records so that use may be made of various health facts. Schools report that "some" use is made of them, generally by the superintendent.

Most authorities are agreed that from the economy and efficiency standpoint it is wise policy to keep teachers in good health. State Certification Laws demanding Health certificates are of little value unless a rigid medical inspection is required.

The thirty per cent of Montana schools which try to ascertain the health of teachers during employment usually depend on the superintendent to estimate their condition. The estimate is probably valueless, and if depended upon too much may cause harm.

Forty-five per cent of the Montana High Schools grant sick leave at full pay. The median number of days allowed is five.

Some type of health examination is made available to students in 66% of Montana schools. National surveys show that they are given in practically 100% of these schools. Examinations are usually given in Montana once a year; are compulsory; and include eyes, throat, teeth, ears, weight and height.

A great defect in the Montana Health Program is brought out by the fact that only 53% of the schools require their
athletes to be examined immediately before participating in strenuous sport. Some of these schools offer general examinations for the students some time during their high school career, but neglect to give their athletes a careful examination. The greatest offenders are the smaller high schools.

About 15% of the high schools report that the defects found are corrected. In most cases this work is done by county officials. Clinics are made available by some schools but are usually only for students on relief. The Indians are reported as obtaining much more clinical assistance than white students.

It seems that much money is wasted in Montana by giving health examinations and finding defects, since very little is done about remedying them when they are found.

Hot noon lunches are served in 30% of the high schools. This is usually one hot dish available to all children free of charge. Montana conditions make this plan very necessary and some such system of providing hot food, especially in the winter months, should be part of every health program.

Only 15% of the schools immunize pupils against contagious diseases. The Montana Tuberculosis Association is attempting to give the Tuberculin Test in all Montana high schools, but this effort will probably not be very extensive unless financial aid is received from other sources.

Forty-two per cent of Montana high schools follow the
state course of study in Health and Physical Education. This manual contains much material for a Physical Education program but little for a good Health program.

The Physical Education teacher gives most of the health instruction, and Science (usually Biology) teachers are next. Less than 10% of the schools offer a definite course in health. Only one school reports a special class. The Exceptional Child Survey in 1934 found that defectives in school range from 14% partially blind down to 2% for speech defectives. Many of these students must be in high school and need special consideration.

Attempts to measure the results of health education are few. However, very few standard methods have been devised as yet.

Montana principals report that, in their opinion, the greatest hindrances and also the greatest aids to their health program are local conditions. This involves funds, facilities and cooperation from parents and other health agencies. Lack of money is the greatest drawback.

The Tuberculin Test survey started by the Montana Tuberculosis Association has been reported most frequently as the outstanding health work attempted recently in the schools.

Almost half of the Montana high school principals consider their program "poor." Only 7% rate it as "good." This indicates that the schoolmen realize the deficiencies
of the program and would probably be willing to remedy its shortcomings if they had sufficient funds or if the state department made it mandatory.

**General Recommendations**

1. There should probably be a state director of Health (including Physical Education) appointed by the Superintendent of Public Instruction. He should formulate policies, adopt programs, maintain relationships with outside agencies, approve health programs in normal schools and colleges, recommend health qualifications for teachers certificates, provide suitable courses of study for supervisors, and supervise and inspect Health programs (including Physical Education) in the various schools of the state.

2. Each school should have a trained director of Health whose duty it is to coordinate the Health and Physical Education work in the school. In small systems the principal or other trained teacher may assume this duty, but it is imperative that someone definitely has the authority to see that health is organized and not neglected.

3. The school board and community should be educated to demand health work in schools as they demand high scholastic achievement, or good basketball teams.

4. Means should be taken to compel a strict enforcement of the quarantine law for preventing the spread of communicable diseases. School officials should be acquainted with
and make use of the law regarding exclusion of pupils suspected of contagious diseases.

5. A larger administrative unit would enable more of the schools to provide a complete health staff.

6. A certain minimum program of Health and Physical Education for students and teachers should be required before a school could be accredited.

7. No high school should attempt to engage in interscholastic athletic contests, especially basketball or track, unless it is able to give all participants a physical examination, immediately before the training season begins. The examination should stress the condition of the heart and lungs.

8. Montana high schools should eventually assume the responsibility for many of the health services now performed by outside agencies, in order that the work be better planned and unified. This change should take place as soon as economic conditions warrant it.

9. The advisability of setting up a state program of special classes for defective children should be thoroughly investigated. Sight-saving classes seem to be particularly necessary.

10. A study of the value of high school fire drills would prove interesting and helpful, as little work seems to have been done in this field.
APPENDIX

SAMPLE OF LETTER AND QUESTIONNAIRE USED IN OBTAINING DATA FOR THIS STUDY

* * * * * * *

MAP SHOWING LOCATION OF HIGH SCHOOLS INCLUDED IN THIS SURVEY
Dear Superintendent:

The status of the high school Health Program is a moot question in the state of Montana. The few available statistics we do have are very indefinite, and in some cases contradictory and absurd.

I am asking your cooperation in filling out and returning this inquiry form. It will take from ten to fifteen minutes of your time, depending on how extensive your health program is. The questionnaire appears to be long on account of the multiple choice answers I have written in to save time on the part of the person answering the questions. In most cases, with the exception of the table on the first page, a check or one word is all that is necessary. The facts ascertained will be mailed to you when the study is completed, if you so desire.

Please keep in mind that although Health and Physical Education are closely related, I have confined this inquiry to Health only, and have omitted strictly Physical Educational items, such as routine gym class work.

Also please note that this survey is concerned with the High School only, and not with the elementary school.

You may feel free to give the facts as they are in your school, even though you know they are not as they should be. The separate report from each school will, of course, be considered confidential, as only the composite, tabulate scores will be used in the final study. There will be no reference to source other that whether the schools are in first, second, or third class.

I am sure that the final report of this survey will be well worth the time expended in filling out the enclosed form. A prompt reply will be appreciated as I wish to get the returns from these blanks tabulated before the end of this school year. A stamped, addressed envelope is enclosed for your convenience.

Yours truly,
THE HEALTH PROGRAM IN THE HIGH SCHOOL OF MONTANA

I. Organization and Administration.

1. Does your high school have a definite Health and Physical Education Program?

2. Is physical education a part of your general health program. OR Is health work a part of your physical education program.

3. Please check the persons who do the Health work in your high school, and also indicate the time spent in hours per week and weeks per year.

   a. Director of Health
   b. Physician
   c. Dentist
   d. Nurse
   e. Mental Hygienist
   f. Phys. Ed. teacher
   g. Spec. health tchr.
   h. Classroom teacher

   Check Hrs. per wk. Wks. per yr.

4. Please check with of the following agencies contribute toward the Health Program in your high school, either financially or by services. Double check the greatest contributors.

   a. State Bd. of Educ.   f. County
   b. State Bd. of Health.  g. F. E. R. A.
   c. City Bd. of Health.   h. ______________
   d. Local Bd. of Educ.   i. ______________
   e. Red Cross

5. Please give here, if possible, the amount spent from regular school funds for the Health Program in hour high school per pupil per year _________. Is this figure accurate or is it an estimate _________.

110.
6. Are fire drills held in the high school?
   Regularly? ______ Irregularly? ______ How many per year? ________

7. Does your high school cooperate with parents in presenting health activities? ______
   How? (check)
   a. By home projects...........
   b. By sending home reports of medical exams......
   c. Home visits by nurse...........
   d. Health talks at community meetings........
   e. Health items in the school or local newspaper........
   f. __________________________

   a. Is the employment of teachers in your high school dependent in part on their ability to measure up to certain health standards?.......
   b. Once employed, are teachers placed on probation in regard to their health condition?.....
      If so, how is their health condition determined? (check)
      1. By teachers' statements.........
      2. By superintendent's estimate.........
      3. By doctor's certificate...........
      4. __________________________
   c. Health examinations for teachers.
      1. Does your high school require a physical examination when teachers are employed? .........
      2. Are they examined periodically thereafter?......
      3. Are the teachers required to pay for this service?........
   d. What is done to keep teachers in good health besides these examinations (check)
      1. Teachers' rest room (not a toilet, but a lounging room)........
      2. Allowed sick leave with full pay?.........
         How many days per year?...........
      3. Allowed sick leave with part pay?.........
         How many days per year?...........
      4. Requiring teacher to be immunized against communicable diseases.......If so, please list these diseases
      5. Granting teachers leaves of absence at intervals...........
      6. Protecting teachers from excessive pupil or class load........
II. Health Examinations for Students.

1. Are health Examinations given your high school students at any time during their high school career? 

2. How often? (check)
   - a. Once a year
   - b. Twice a year
   - c. Once during school career
   - d. ____________

3. Is this examination compulsory? 

4. Please check the items included in this examination:
   - a. Eyes
   - b. Throat
   - c. Teeth
   - d. Ears
   - e. Nose
   - f. Heart
   - g. Lungs
   - h. Weight
   - i. Height
   - j. ___
   - k. ____________
   - l. ____________
   - m. ____________
   - n. ____________

5. Please double check any of the above items if remedial or corrective work is offered.

6. Who does this follow-up work to remedy the defects found by examination? (check)
   - a. School physician or dentist
   - b. County physician or dentist
   - c. City physician or dentist
   - d. School nurse
   - e. County nurse
   - f. ____________

7. Are parents informed of the defects? 

8. Is corrective physical education offered to these students found by examination to need it? 

9. Are free clinics (other than school) maintained for the poor students of your school? 

10. Does your school maintain a reduced price clinic? 

11. Are your athletes given a physical examination before they are permitted to engage in interscholastic activities? 

12. What attention, if any, is given to the health of adolescent girls during this critical period? (check)
   - a. No attention
   - b. Advice given by some faculty member
   - c. ____________

III. Health Instruction in the High School.

1. Do you follow the state course of study for Physical Education and Health? 

2. Check the persons giving definite Health Instruction, in your high school.
   - a. Special teacher of health
   - b. School nurse
   - c. County nurse
   - d. School physician
   - e. County physician

-
3. Is Health offered as a definite course in your high school?........ If so, please give the following information:
   a. Exact name of course______________________
   b. Periods per week_________________________
   c. Number of weeks_________________________
   d. Credit given, ½ or 1_______________________
   e. Is the course required?____________________

4. If some health instruction is given in other courses, please indicate which ones:
   a. All other classes....... c. Biology...........
   b. Physical education....... d. ______________________

5. Please list any special high school classes you offer for defectives or the handicapped. ___________

6. Do you attempt to measure the results of Health Education?........ How? (check)
   a. By frequent physical examination...........
   b. By check-ups on defects corrected...........
   c. By individual charts.........................
   d. By tests and records..........................
   e. By periodic weighing and measuring........
   f. By daily inspection of hands, teeth, and hygienic habits........
   g. ________________________________

IV. Other Health Services.
1. Does your high school serve hot noon lunches?_______
   If so, check:
   a. To all students...... d. How financed:
   b. To needy students..... By school....... e. Is a full lunch or only one hot dish served?
   c. Number of months per year....... f. ________________________

2. Please check other health services your school offers:
   a. Free immunization (please list diseases)_______
   b. Free milk for malnourished........
   c. Lectures on health to parents........
d. Health instruction to parents

V. Health Activities.
Please check the Health activities which are fostered among your high school students:
1. Health Posters
2. Health plays and programs
3. Hikes and excursions
4. Health contests
5. Health clubs
6. Health lectures

VI. Hindrances and Aids to Health Work.
Please check what you consider the greatest hindrance or aid to Health Work in your high school:
A. Hindrances:
1. Lack of cooperation from parents
2. Lack of facilities at school
3. Lack of cooperation from outside agencies
4. 

B. Aids:
1. Cooperation from parents
2. Cooperation from outside agencies
3. Good home conditions
4. Good facilities at school
5. 

VII. Health Records:
1. What Health records do you keep? (check)
a. Complete card file, including record of physical examinations, contagious diseases, etc.
b. Record of physical examination only
c. Record of contagious diseases only
d. _________
e. 

2. Who makes use of them?
a. No one
d. Students
b. Superintendent
e. Parents
c. Teachers
f. _________

3. What use is made of them?
a. None
b. Some
c. Much

VIII. Please describe any additional features of health work, or any special study of health problems which have been carried on recently in your school: ______________________

________________________________________________________________________
IX. Please give your estimate of the Health Program carried on in your high school: Good... Mediocre... Poor.... If you are dissatisfied, in your opinion, what is the most needed change?

______________________________

______________________________

Name of school reporting

Name of school officer

You will receive a summary of the results of this study as soon as it is completed.

Return to:
Chas. E. Hood
Supt. of Schools
Windham, Montana
CHART I
Location of High Schools
Included in this Survey

RAND McNALLY
LETTER SIZE OUTLINE MAP
MONTANA

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Joint Committee on Health Problems in Education. (Edited by Thomas Wood.) Health Education. Chicago: American Medical Association Press, 1930.


Larson, E. M. Unpublished address before the County Superintendents, Helena, June, 1935.


Montana High School Physical Education and Health Course of Study. 1932.

Montana Course of Study for Junior High Schools. (Health Education, pp. 491-534.) 1934.


*The Teacher's Health: What Some Communities are Doing to Preserve It.* School Health Bureau Monograph No. 4. New York: Metropolitan Life Insurance Co., (no date).


