1951

A district health department plan for Daniels Richland Roosevelt and Sheridan counties

Henry William Jorgensen
The University of Montana

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A DISTRICT HEALTH DEPARTMENT

PLAN FOR

DANIELS, RICHLAND, ROOSEVELT, AND SHERIDAN COUNTIES

by

Henry W. Jorgensen

D.A., Montana State University, 1958

Presented in partial fulfillment of the requirement for the degree of Master of arts.

Montana State University

1951

Approved:

[Signature]

Chairman of Board of Examiners

[Signature]

W.P. Clark
Dean, Graduate School
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CHAPTER I

INTRODUCTION

Human Conservation. Some years ago the author appeared before a group of people to be interviewed as part of an examination for a position as social caseworker under the Montana Merit System. One of the questions asked was, "What is our greatest natural resource?" Mineral, lumber, water, and petroleum resources were duly considered before the reply was given that soil and our agricultural potential were our greatest resource. In response to the answer the interviewer quietly asked, "What about our human resources?"

Conservation of our material resources has long been accepted as an important need in our society. Definite action is being taken to restore our forests, to rebuild depleted soil, to conserve our petroleum supplies by better refining methods. But conservation of our greatest resource, our people, has been slow to come. The loss to our society in terms of suffering, hours lost from productive work, the cost of medical care for preventable disease, and insecurity is something that cannot be measured.

Public health is aimed at conservation of our
greatest resource, our people. It is based on the old adage that an ounce of prevention is worth a pound of cure. The shortage of medical, dental, and nursing personnel emphasizes the greater relative importance of keeping people well rather than caring for people when they become ill.

Current Emphasis. There is evidence to indicate that the importance of, and necessity for, public health activities is gaining wider recognition on all political levels. Under the United Nations World Health Organization public health officers of most nations cooperate in reporting outbreaks of epidemics and in screening travelers who cross international borders. All persons who board ships or airplanes for international travel are required to furnish proof of immunization against certain diseases. United States Public Health officials overseas examine persons traveling to the United States and may quarantine persons coming from a communicable disease area.¹

The American Medical Association and the American Public Health Association adopted resolutions in 1942 endorsing establishment of full-time health services

¹. G. D. Carlyle Thompson, Series on Public Health in Montana, No. 34 (Helena: State Board of Health, March 22, 1951)
throughout the country.2

On June 20, 1950 the Montana State Medical Association, assisted by the State Department of Public Instruction, the State Board of Health, and the Montana Dental Association, sponsored a Physicians and Schools Conference at Helena, Montana. The fact that 218 people from Montana, including physicians, dentists, nurses, school administrators, psychiatrists, welfare workers, and representatives of voluntary agencies and health councils attended this meeting may be taken as an indication of considerable interest in public health in the state.3

Measurement of Community Health. Health today is generally defined as a "state of complete physical, mental, and social well being, not merely the absence of disease or infirmity."4 It is difficult to measure results of a health program in terms of mental and social well being but certain physical aspects can be measured. The health of a population can be determined by the rate of infant


and maternal mortality, life expectancy, death rate, deaths from communicable and preventable diseases, time lost from work, and deaths from industrial diseases.⁵

Generalizations from isolated examples may prove unwise, but a report by the United States Public Health Service on the results obtained from establishing a local health department in Jones County, Mississippi, showing a comparison of some of the factors listed above indicate what can be accomplished by establishing local health services.⁶

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### TABLE I

**COMPARISON OF VITAL STATISTICS**

**JONES COUNTY**

**1937-1944**

<table>
<thead>
<tr>
<th>Deaths by Age Groups</th>
<th>1937</th>
<th>1944</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 65</td>
<td>365</td>
<td>256</td>
</tr>
<tr>
<td>Over 65</td>
<td>135</td>
<td>162</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deaths under 15</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Diphtheria</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Influenza</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Syphilis</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Stillbirths</td>
<td>54</td>
<td>38</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cases of Illness (all age groups)</th>
<th>1937</th>
<th>1944</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>983</td>
<td>503</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>63</td>
<td>30</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Scarlet Fever</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Typhoid</td>
<td>5</td>
<td>0</td>
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Need. People with higher incomes will usually maintain a better health status than those with low incomes. They can better afford medical services and better living conditions. A national health survey in 1938 indicated that as incomes go down, illness rates go up. Members of families of low income and relief status suffered more than two and one-half times as much disability from all diseases combined as did families with income of $5,000 and over. It is in this area that educational and preventive medicine functions of public health can render the greatest service.

Public health administered directly from the state level has obvious limitations. The size of Montana makes it impossible for state health personnel to keep in close touch with local areas and conditions and to promote much interest in public health. An example will illustrate the point. The State Board of Health since December of 1949 has prepared press releases containing valuable information of an educational nature which are sent to the newspapers of the state for publication. Yet one editor, when asked why these press releases never appeared in his paper, did not know about them and indicated that they


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might have gone into the waste basket with quantities of other mail. Another editor published the releases only after considerable pressure had been exerted by the local health council. A local health department could localize information and make it more acceptable both to publishers and readers.

Cost. According to a report by the Federal Security Agency, the cost of public health services in the United States during the fiscal year ending June 30, 1946, was as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost</th>
</tr>
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<tr>
<td>State</td>
<td>$5,751,053.06</td>
</tr>
<tr>
<td>Local</td>
<td>$49,562,977.12</td>
</tr>
<tr>
<td>Federal</td>
<td>$11,835,062.98</td>
</tr>
<tr>
<td>Other</td>
<td>$794,938.72</td>
</tr>
<tr>
<td>Total</td>
<td>$67,952,033.83</td>
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The Bureau of the Census shows the total population for the United States as 150,697,561. Current estimates place the amount needed to blanket the nation with adequate public health services at $2.00 per capita. This would require a total of about $301,400,000. The government expenditures for other purposes dwarf this.

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10. G. D. Carlyle Thompson, Establishing Local Health Departments in Montana (Helena: State Board of Health, 1950) p. 2

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amount into insignificance in proportion to the amount of benefit we might expect to derive from having full-time public health services available to all our people. This is the price tag on a public service aimed at conservation of human resources.

The Problem. Impressed by the fact that the state of Montana lagged in providing public health services according to generally accepted standards, the author undertook a general study of public health services in the state and a more intensive study of services in northeastern Montana embracing the counties of Daniels, Richland, Roosevelt, and Sheridan.

The problem was chiefly to analyze the district health department authorized by the legislature of 1945 as a means of providing complete public health services to sparsely populated rural areas. The counties listed above were selected for the study since interest in establishing a district department seemed greatest in that region.

In order to gain materials and impressions regarding the procedure, problems, and difficulties encountered in establishing such a department, the author during the past two years attended health council meetings, health conferences, and regional meetings called to discuss district health departments.
personnel were interviewed and literature published by state and federal health and educational agencies were studied.

The presentation of the problem includes a brief history of the development of public health and its present status in Montana. Following chapters include a description of organizational procedure for a district public health department, a discussion of health personnel, and a description of the functions of a health department. Since schools are the media for attaining many of the objectives of a health program and their cooperation is most essential, a separate chapter has been provided for school health. Another chapter is devoted to a study of an area for which a district health department is proposed, with the view of providing useful data in putting such a plan into operation.
CHAPTER II

HISTORY AND PRESENT STATUS

Historical Development. The origin of the public health movement dates back to 1797 when the first state board of health was established in Massachusetts, the state where leadership also was taken in developing free public education. The first full-time county health department was established in 1907. By 1935 there were 561 full-time health departments covering 762 counties. In 1947 there were 1284 organized local health departments covering 1874 of the 3070 counties in the United States. Of these departments, however, health officer vacancies were reported in 509 of the departments covering 855 counties.1 Available professional personnel had not been able to keep up with rapidly growing demands.

The public health movement originated in Montana in 1883 when the Territorial legislature passed a law creating county boards of health in each county to be composed of the county commissioners and a licensed physician. The principle function of this board was to control

---

contagious diseases.2

In 1901 the State legislature created a State Board of Health with an executive secretary required to be a physician experienced in sanitary science. The board was directed to make sanitary inspections and to investigate causes of death, epidemics, and nuisances affecting health.3

In 1917 a law was passed authorizing county commissioners to employ a public health nurse. Rules and regulations governing her duties were to be determined by the State Superintendent of Public Instruction and the Secretary of the State Board of Health.4

The first full-time county health officer was appointed temporarily in Gallatin County in 1919 to deal with a serious situation created by the influenza epidemic.5 After a lapse of ten years, a full-time health department was formed in 1929 in the county. The staff consisted of a full-time health officer and two nurses. Funds for support of the department came from various sources, including the city, county, and a Rockefeller Foundation


5. Gallatin County Commissioners Journal, XII, 406
grant. The Cascade full-time health department was organized a few years prior to the Gallatin County department formed in 1923.

In 1907 the state legislature established a State Board of Health composed of seven members, plus an executive secretary who must be a physician. Under an amendment adopted in 1949, three members must be medical doctors; one a dentist, and three shall be lay persons. This law prescribes the following powers and duties of the State Board:

1. Maintain general supervision of health in the state.
2. Study and make intelligent use of vital statistics.
3. Make sanitary investigations.
4. Investigate communicable disease epidemics.
5. Disseminate information on localities, employment, and conditions affecting health.
6. Inspect public institutions.
7. Give advice regarding sewage disposal, water supply, and heating and ventilation of public buildings.
8. Enforce statutes regarding communicable diseases.
9. Supervise local officers and health boards.

6. Gallatin County Commissioners Journal, XVII, 422;
Inventory of the County Archives of Montana, Carbon, Gallatin, Park, Stillwater, Sweet Grass, Historical Records Survey (Bozeman: EM3, 1942) pp 206-209


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10. Prepare and issue regulations for lighting, heating, and ventilation of schools; cause inspections to be made of schools, churches, and public establishments; and approve construction of new buildings for these purposes.

11. Investigate city sewer systems emptying into streams or sources of water supply and approve new construction before made.

12. Furnish the county clerk of each county with a list of adulterated and misbranded food to be published in local newspapers.

The executive secretary was given broad duties and powers to:

1. Keep records of transactions of the board.
2. Communicate with local authorities and with health boards in other states.
3. Supervise local officials.
4. Inspect records of local officials.
5. Investigate causes of disease.
6. Distribute instructions regarding prevention of communicable diseases.

The law of 1907 reenacted local health boards consisting of the county commissioners and a physician, directed these boards to hold quarterly meetings, and required them to report communicable diseases and the general health and sanitary conditions of their respective counties to the State Board of Health. 9

The 1907 law thus laid the basis for the development of a public health program in Montana.

No distinction in name has been made between the seven-member executive board and the administrative staff

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9. *Font. Revised Codes, 1947*, secs. 69, 701, 703, 704

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that carries out board policies and legal directives. Actually the former should be known as the State Board of Health which meets only occasionally to discuss policies and make executive decisions while the latter might be more properly designated as the State Department of Public Health. The organization and function of each parallel those of the State Board of Education and the State Department of Public Instruction respectively.

Various divisions have been added to the State Board of Health as the need has arisen. The Bureau of Vital Statistics was established in 1907 to maintain records of births, deaths, and marriages. In 1911 the Pure Food and Drug Act was passed under which the Board is empowered to inspect and enforce certain standards for the sale of food and drugs. The State Board of Entomology was created in 1913 to function under the control of the Board of Health, mainly for the purpose of controlling Rocky Mountain Spotted Fever and in general to eradicate disease-carrying insects and rodents. The Division of Maternal and Child Health was established in 1917.

10. Laws, Resolutions and Memorials of the State of Montana, 1907 (Helena: State Publishing Co. 1907), ch. 25
11. Montana Session Laws, 1911, ch. 130
12. Montana Session Laws, 1913, ch. 120
A law passed in 1919 authorizes the State Board of Health to employ an epidemiologist to direct the control of contagious diseases.\(^\text{14}\)

The Industrial Hygiene Division was established in 1939 to study occupational diseases and health conditions in the state's industries.\(^\text{15}\) In 1941 the Crippled Children Services, formerly placed in the Public Welfare Department, were transferred to the Board of Health.\(^\text{16}\) The Dental Health Division was formed to promote protection and improvement of dental health.\(^\text{17}\) In 1945 the Division of Tuberculosis Control was established to contract for federal funds and to carry on a control program.\(^\text{18}\) Under a law passed in 1947 the Division of Hospital Survey and Construction was created to inventory existing hospitals and needs and to develop a statewide plan for provision of adequate hospital facilities. This office was also set up to comply with requirements for obtaining federal funds.\(^\text{19}\)

\(^{14}\) Montana Session Laws, 1919, ch. 76

\(^{15}\) Montana Session Laws, 1939, ch. 127

\(^{16}\) Montana Session Laws, 1941, ch. 126

\(^{17}\) Montana Session Laws, 1943, ch. 125

\(^{18}\) Montana Session Laws, 1945, Ch. 170

\(^{19}\) Montana Session Laws, 1947, ch. 270
Present Status of Local Health Services. At the present time there are four counties in the state, including Big Horn, Cascade, Gallatin, and Missoula, with full-time public health departments. As indicated previously, Cascade and Gallatin counties have long had full-time public health services. Missoula County established a full-time department in the summer of 1951. Big Horn County also established a full-time health department in 1951 through a special arrangement of the county with the Indian Service, State Board of Health, and school districts.21 See Figure 1, page 17.

Seven counties, including Blaine, Custer, Fergus, Lewis and Clark, Richland, Silver Bow, and Yellowstone, employ a part-time health officer and one or more public health nurses. Valley County has budgeted for a sanitaryian.

Other counties providing services including at least those of a public health nurse are Beaverhead, Flathead, Hill, Lake, Lincoln, Musselshell, Pondera, Ravalli, Sanders, Sheridan, Teton, and Toole.22


22. Loc. cit.; information regarding present status of health services also supplied by Dr. L. S. McLean, Director of Local Health Service, State Board of Health.
The Blackfoot, Fort Peck, and Tongue River Agencies in Glacier, Roosevelt, and Rosebud Counties respectively employ public health nurses for the Indian population. Nurses are also employed by the Fort Belknap, and Rocky Boy Agencies in Blaine and Hill counties respectively, in addition to personnel employed by the county. These nurses render a valuable service to the Indian population as the rate of tuberculosis is high among Indians.23

This leaves thirty-two counties in the state which meet only the legal requirement that a physician be appointed county health officer. Since the salary for this official is usually very small, the services are also correspondingly small. In three of these counties, as pointed out above, there are public health nurses employed by the Indian service.24 However, their duties do not extend to the white population.

23. Division of Public Health Nursing, Public Health Nurses in Montana (Helena, Montana State Board of Health, 1950) 1 page

CHAPTER III

THE DISTRICT HEALTH DEPARTMENT

Organization. Prior to 1945, it was virtually impossible for many areas of the state to provide a complete public health service program. Many of the counties with a small population and limited valuation could not have financed such a program. In that year enabling legislation was passed whereby two or more counties could pool their resources to support a district health department.

When a group of counties unite to establish a district health department, a district board of health must be created. This board must be composed of not more than seven members. Membership must include a member of the board of county commissioners from each county appointed by the commissioners of the respective counties. Other members of the board shall include a superintendent of schools, a dentist, and a medical doctor who will be appointed jointly by the county commissioners of the respective counties or, in case of disagreement, by the State Board of Health. The full term of office will be for seven years with the term of one member expiring each year. See Figure 2, page

Members serve without compensation except for

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mileage and per diem. Meetings must be held at least quarterly.\(^1\)

The duties of a district board of health are comparable with those of a board of education. It designates the location of the health department and must provide office space and equipment. It establishes policies and approves the health program. It enacts rules and regulations pertaining to the prevention of disease and the promotion of health in the area. It prepares the annual budget for submission to the respective counties.\(^2\)

The district board of health must employ a full-time health officer who will also be the board's secretary. Additional minimum personnel for a full-time department includes a clerk and sanitarian for the district and at least one public health nurse for each participating county.\(^3\)

**Finance.** The matter of finance in district health departments presents a number of problems to be ironed out. Complete clarification may require further legislation. A spirit of cooperation among officials in the counties involved will be essential for successful operation.

---

\(^1\) *Montana Session Laws*, 1945, ch. 171, sec. 6

\(^2\) Ibid., secs. 6-11

\(^3\) *Montana Session Laws*, 1945, secs. 7-8
An annual budget must be prepared by the district board of health and submitted to the county commissioners of the cooperating counties at least two weeks before the date for setting up official budgets. Each county must then take action to adopt as part of its budget a portion of the department's budget based on the proportionate assessed valuation of the county to the total for the district.4

The amount that each county must contribute can be determined definitely from the amount of the budget and assessed valuations. But the amount of the taxes to be levied by the tax authorities for this purpose is dependent on various factors. Towns, school boards, and other official and non-official agencies may contribute funds for support of the department.5 The State Board of Health has established definite standards and criteria whereby it will grant funds to local departments.6 After the amounts available from these sources have been determined for the county, the balance must be provided from the county general fund or from an additional special one-mill permissive levy.7

4. Ibid., sec. 12
5. Montana Session Laws, 1945, sec. 11
The law does not specify how the funds budgeted for the district health department are to be disbursed. For the sake of convenience, it appears that funds from all cooperating counties should be deposited with the treasurer of one county and disbursed by him. An amendment to the law stating that funds of the department are to be disbursed by the treasurer of the County in which offices are maintained would clarify the matter and provide a logical solution.

State aid under present standards is allocated on a county basis. For counties with a population of less than 8,000, the amount is $1,000 plus fifty cents per capita. For counties with over 8,000, the amount is $5,000 plus ten cents per capita. The total state aid allowed, however, will not exceed thirty-five percent of the total budget, nor will state funds be provided to reduce or be substituted for local funds. Should any district departments be established, the State Board might find it desirable to set up criteria on a district basis as well as the present county basis.

Funds available from the State Board of Health are determined by legislative appropriations. The amount of the appropriation for the biennium 1951-1953 was increased

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8. Thompson, op. cit.
somewhat but the increase in the number of counties to which aid is granted may easily result in reduction of aid to specific counties. Local areas should, therefore, be prepared to assume the major financial responsibility for public health services.

Role of the Health Council. It is a widely held view among people and agencies concerned with public health that to successfully establish public health services requires formation of a local health council. Without this grass-roots foundation, popular interest and support cannot be mustered behind the program. The more agencies and organizations that are represented on this council, the greater the assurance of success. For a suggestive chart of organization groups in a health council for the four-county area described in Chapter VII, see Figure 2, page 25.

Montana has a Health Planning committee established on the state level with a membership representing health, educational, labor, public welfare, agricultural, governmental and extension service groups. This committee, together with State Board of Health personnel,


10. State Board of Health, County Health Planning Committees (list supplied by State Board of Health)
provides leadership and assistance for local groups who wish to establish health councils. For a list of counties in Montana that have established health councils, see Figure 5, page 26.

Ordinarily interest in establishing a health council comes from a few individuals or some organization. These people must stimulate interest, overcome apathy, get publicity through the newspapers and public meetings, get assistance from State Board of Health personnel, enlist the support of professional groups, and make some form of survey of needs. The council is a voluntary unofficial agency. It should be organized with officers and membership representing as many organizations as possible in the county or district. To be successful, people of the medical and dental professions must attend meetings and participate in planning. Members must be given definite tasks to perform and meetings must be open for anyone interested to attend. If these steps are taken, there will be the most likelihood of cooperation between different groups, support by the medical profession, and interest on the part of the community as a whole.


Figure 2
Plan of Organization of Health Council and Health Department
Northeastern Montana 4-county Area
FIGURE 3

COUNTIES WITH HEALTH COUNCILS
The National Health Council lists these functions of a health council:13

1. Coordinate thinking and planning of all organizations.
2. Prevent overlapping and duplication of health activities.
3. Study health needs of the community through appraisals, inventories, and surveys.
4. Develop a health program geared to needs.
5. Stimulate public interest.

The American Medical Association14 lists the following suggested projects for a health council:

1. Health education.
3. Secure adequate hospital and clinical facilities.
4. Promote voluntary prepayment plans.
5. Investigate problems relating to indigent persons and illness.
6. Secure public health services.

The most immediate problem of a newly-formed health council in Montana would most probably be to secure some degree of public health services, either the limited services of a nurse and perhaps a sanitarian, or the complete services of a full-time health department.


CHAPTER IV

PERSONNEL

Introduction. One of the chief obstacles to rapid progress in public health is lack of a sufficient number of well-trained personnel. Young people have not been adequately informed of the opportunities in public health. Salaries have usually been lower than in private service. Since monetary rewards are not so great, the satisfaction of rendering public service must be sought at least as much as dollars and cents.

There are certain inherent differences in the work of a public health worker and that of a private practitioner. Public health workers are members of community, state, and national teams serving all the people. They get their chief satisfaction in results that can be measured in vital statistics. The private physician and nurse have the joy of bringing healing and comfort to individual patients.

The prospective public health worker should have good health, emotional stability, tact, a pleasing personality, happy disposition, sense of humor, administrative ability, and a creative imagination. In general, the requirements are the same as those needed for the
practice of the profession plus one year of specialized public health training.¹

In Montana the law provides that all public health personnel must be employed subject to the rules and regulations of the Merit System Council. This Council determines the salaries, duties, and qualifications of public health personnel subject to the approval of the State Board of Health.² If local departments wish to do so, they may pay above the Merit System schedule, provided they adopt a higher schedule for all their employees.³

Under the law adopted in 1945 the minimum personnel for a full-time health department must include a health officer, sanitarian, clerk, and at least one nurse for each county.⁴ The public health profession recognizes this as a basic minimum staff. The need for increasing the supply of adequately trained personnel is emphasized by a comparison made by the public health service in a report published in 1945 between the number of professional


4. Montana Session Laws, 1945, ch. 171, Sec. 8
people needed in the United States and the number presently employed.5

<table>
<thead>
<tr>
<th></th>
<th>Number Needed</th>
<th>Number Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>3,000</td>
<td>1,540</td>
</tr>
<tr>
<td>Public Health Nurses</td>
<td>26,500</td>
<td>11,136</td>
</tr>
<tr>
<td>Sanitarians &amp; Engineers</td>
<td>10,000</td>
<td>4,913</td>
</tr>
<tr>
<td>Clerical Workers</td>
<td>9,000</td>
<td>6,113</td>
</tr>
</tbody>
</table>

The question sometimes arises as to why the training of professional workers is not stepped up to close the gap between supply and demand. A national health assembly of doctors, nurses, dentists, social workers, and lay citizens discussed this matter and came to the conclusion that the shortage of doctors became acute because of army recruiting, additional health centers, and public health services, an aging population, wider use of personnel and facilities, and because the small ratio of students to teachers required a large number of doctors as instructors in medical schools.6

A training program for public health nurses in Montana has been in effect since 1933. Under this program, funds have been provided through the Federal Security Agency for training periods ranging from three weeks to

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an academic year. The amounts have varied from tuition only to a monthly stipend plus tuition and travel. This training program is now in the process of revision to establish definite criteria that will provide for training of all public health workers.7

Health Officer. The administrative officer for a district public health department in Montana must be a licensed physician, preferably with one year of special public health training. He is appointed by the district board of health for a term of four years.8 His beginning salary under the Merit System classification is $7,800 per year.9 The generally accepted population ratio is one health officer to 50,000 people. However, in Montana the State Board of Health has modified this ratio to one health officer for a minimum of 11,000 people because of the large, sparsely populated areas.10

A popular fallacy is that the health officer is also the county physician charged with the duty of providing medical care to indigent sick persons. This

7. Interview with Wava L. Dixon, acting Director for Public Health Nursing

8. Montana Session Laws, 1945, ch. 171, sec. 7


10. Montana State Board of Health, op. cit., p. 7
misconception has risen from the fact that in many coun-
ties, commissioners have contracted with the same physi-
cian for both duties. A clear distinction must be made
between the two officers, however, and under the law a
full-time health officer is not permitted to act as county
physician.11

The duties of a health officer as listed by the
Merit System Council and further clarified by Dr. L. S.
McLean, Director of Local Health Services, Montana State
Board of Health include the following:12

1. Gives talks on public health services, facili-
ties, objectives, and practices.
2. Maintains good relationships with physicians
and dentists by consultation to obtain coopera-
tion and support for the program.
3. Conducts public health conferences and clinics.
4. Secures and supervises activities of staff.
5. Makes budget recommendations.
6. Assists in coordination of state and local
health activities.
7. Surveys local health needs.
8. Promotes and administers a program of preven-
tion and control of public health problems.
10. Prepares reports.

Sanitarian. The district board of health employs
the sanitarian upon recommendation of the health officer.
The lowest beginning salary is $2,880 per year.13 The

11. Montana Session Laws, 1945, ch. 171, sec. 10
recommended population ratio is one sanitarian for the first 8,000 to 15,000 people. Minimum qualifications include a bachelor's degree with at least fifteen semester hours in courses dealing with public health sanitation or food and drug control, plus orientation training by the State Board of Health. Courses should include bacteriology, chemistry, biology, epidemiology, and entomology.

The job of the sanitarian is primarily one of education, inspection, and law enforcement. The emphasis should be on education. The sanitarian needs to be a very tactful and diplomatic public relations man. Business places and other organizations or persons are prone to resent inspections as snooping and to fear that innovations may be required that will force them out of business. They must be given assurance that the sanitarian is there to show them how they can better safeguard the health of their patrons. Gaining the confidence of people, then, is a primary requirement for the sanitarian. Waiving the law, except in extreme cases, creates antagonism that will defeat the program.

Elton Andrew, Director of the Division of Food and Drugs, State Board of Health suggests that a sanitarian taking on a job in a new area should confine his

15. Merit System Council, op. cit.
activities at first mainly to getting acquainted with the community, studying its needs, and answering only urgent complaints. Then he should formulate a plan for attacking most urgent problems where he can render greatest service. His services should not be spread too thin. 16

Typical duties of a sanitarian include inspection of:

1. Buildings used for public purposes.
2. Food handling establishments.
3. Milk supplies.
5. Ruisances.
6. Rodent and insect infestations.
7. Quality of food and drugs.
8. Work with agricultural chemicals.

Public Health Nurse. The public health nurse is employed by the district board of health at a salary ranging upward from $3,120 per year for a nurse with minimum qualifications and no experience. Qualifications include graduation from an approved school of nursing and one year of public health training. 18 The recommended number of nurses is one for every 5,000 people; but under some conditions where scarcity of population and travel conditions pose special problems, there should be one for every

16. MacDonald, op. cit., p. 6
17. Ibid., p. 3; Merit System Council, op. cit.
In addition to professional training, it is desirable that a health nurse should know something about education and child psychology. She should be friendly, direct, patient, sympathetic, tactful, and should have a pleasing personality. The nurse as a social worker can exercise a wholesome influence in the homes of children.

Typical duties of a public health nurse include:

1. Caring for or arranging for nursing care of sick persons.
2. Teaching personal hygiene, sanitation, nutrition, value of medical care, standards of health, and disease symptoms at hospitals, schools, and in homes.
3. Helping mothers understand normal child health and behavior.
4. Urging medical care.
5. Assisting school carry out program of health.
6. Assisting in communicable disease, tuberculosis, and venereal disease control programs.
7. Assisting and supervising volunteers in group work public health activities.
8. Interpreting public health nursing services to interested groups.

Clerk. In a public health department where the board of health employs only one clerk, the employee should preferably be a clerk-stenographer with the upper
class rating. This type of clerk receives a minimum salary of 12,400 per year. Qualifications include graduation from high school, plus two years of stenographic experience or equivalent time in business college training. In addition, proficiency must be demonstrated in written tests. One clerk is recommended for every 15,000 people or one for each group of four professional people on the staff.

Typical duties of a clerk include the following:

1. Acts as secretary to health officer.
2. Takes dictation of proceedings at meetings and hearings.
3. Composes and types letters.
4. Types records and reports.
5. Assists in preparation of reports and office records.
6. Takes applications, answers inquiries, and conducts preliminary interviews.
7. May assume responsibility for some phases of office work.

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22. Merit System Council, op. cit.
23. Merit System Council, op. cit.

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CHAPTER V

FUNCTIONS OF DISTRICT HEALTH DEPARTMENT

Introduction. Wherever public health facilities are established, it will always be in response to a felt need. One of the first things a health officer should do is to survey the needs of the community he is to serve. It is assumed that he will be a trained observer; that he will avail himself of advice and suggestions of a health council, members of medical and dental professions, and others interested in public health; and that he will plan and gear his program to the needs which he discovers.

The emphasis of the program will be determined by conditions in the community but the functions will in most cases include those listed in the balance of this chapter and those described in the following chapter on school health.

Crippled Children's Services. The State Board of Health assumed responsibility for these services in 1941. Since that time a case finding program has been actively staged through clinics conducted in different areas of the state. Cases reported by parents, the State Epidemiologist, physicians, school and health officials, public welfare workers, and other agencies are urged to attend

1. Montana Session Laws, 1941, ch. 123
these clinics. The clinics are diagnostic, and are free to anyone under twenty-one years of age with a crippling condition.

If the family is unable to pay for treatment, funds will be provided by the Division of Crippled Children's Services aided by the Children's Bureau of the Federal Security Agency.²

Local public health nurses assist with these clinics and with follow-up on cases discovered. In 1949 there were 2,000 visits made by health nurses to crippled children in Montana³.

Dental Health. Most of the activity of the local health departments dealing with dental health is educational. People are urged to have teeth examined regularly. They are instructed in proper dental hygiene, making health appraisals of children. Teeth are examined for reference to dentists.

The Dental Health Division of the State Board of Health is conducting a statewide investigation of dental health through cards distributed by schools to pupils on

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² Belle C. Richards, Crippled Children's Services, Press Release No. 11 (Helena: Montana State Board of Health, Apr. 27, 1950)
which the dentist or parents record the dental status of the pupil and return it to the school which in turn forwards it to the state office.

The recent discovery that the presence of fluorine in water retards tooth decay has led to new possibilities. Painting the teeth with a solution of sodium fluoride brought remarkable results in many instances. A more recent development has been the addition of fluoride to the water systems of towns and cities, thereby automatically providing a controlled supply of the fluoride to all who consume the water. Several cities in the state are contemplating such action and have submitted applications to the State Board of Health for installing a fluoridation system. As yet Roundup is the only city to obtain approval of its application, and Board of Health officials will confer with city officials with a view towards getting the process under way during the latter part of 1951. Cost of the process is estimated at ten to twenty-five cents per person annually with an initial outlay of $400 to $800 for "feeder" equipment. Local health authorities may well play an important role in such a program in Montana in the future since technical supervision is required to get it underway.4

4. Great Falls Tribune, July 8, 1951, p. 11; Information also supplied by Dr. F. L. Livingston, Dental Health Division, State Board of Health.
For an excellent treatment of history and research on effect of sodium fluoride on teeth, see "Sodium Fluoride Goes to School" in School Life, May, 1949, published by the Office of Education.

Health Education. One of the greatest services, yet the least spectacular, of a health department is health education. The advances in preventive medical science are of little value unless people avail themselves of their benefits. People face the daily problem of choosing between the great amount of technical knowledge about prevention and cure of illness on the one hand and the misleading advertising and new medicines claiming sensational cures on the other. Health education is the connecting link between scientific knowledge and the people.

All people engaged in work dealing with health are furthering health education, but it is particularly within the realm of public health. Through conferences, clinics, examinations, home visits, consultations, public addresses, printed literature, demonstrations, and inspections, members of the staff are constantly disseminating information. Other resources through which they further this end are the family physician and dentist, hospital personnel, the home demonstration agent, school
personnel, voluntary agencies, and films.\(^5\)

**Maternal and Child Health.** Dr. B. K. Kilbourne, former Executive Secretary of the State Board of Health and present health officer of Big Horn county has emphasized that to protect and improve maternal and child health "offers the greatest opportunities, not only for preventive measures, but also for making possible a more vigorous nation."\(^6\)

The Gallatin county health department reports that the maternity service is one of the most time-consuming for the nurses. Routine visits are made to expectant mothers to urge prompt medical care under a doctor's supervision and to give information useful to the mother before and after the baby is born. Well-child conferences are held every Wednesday afternoon where infant and preschool children are brought for inspection. Nurses discuss with mothers such problems as feeding, normal development, child training, and immunization. All children found to need medical or dental care are referred to the family doctor and dentist.\(^7\)

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7. City County Health Dept., *Annual Report, 1942*, (Bozeman: City-County Health Dept., 1942) pp 10-12

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In an area served by a district health department, pre-school clinics would be held in local centers throughout the area, where the health officer and nurses could conduct conferences with parents and inspect children.

In some instances it may be necessary for the health nurse to render direct nursing service in the home in case of sickness and to teach those in the home how to care for the sick. The nurse may also educate the mother in the home on the care of the baby by actual demonstrations of bathing and feeding and giving guidance in habit training. The extent of such services will be governed by the time available to the nurse. Her activities should in general be planned to provide the greatest amount of service to the greatest number of people. This can best be achieved by group conferences and activities rather than individual work. Persons in urgent need of individual attention may be discovered through cooperation with schools, welfare departments, and physicians.

Fifty public health nurses in Montana in 1943 made a total of 3,352 maternity visits, 10,113 visits to infants and pre-school children, 7,750 visits to school

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E. Frances H. MacDonald, Report on Health Meeting, Poplar, Montana, May 31-June 1, 1951 (Bozeman: State Extension Service, 1951) p. 4

children, and 1,290 visits to care for ill persons.\textsuperscript{10}

Preventable Disease Control. One of the oldest functions of a health department is communicable disease control. It is the legal responsibility of the health officer in every county to protect the community, insofar as possible, from such infections through diagnosis, isolation of cases, tracing sources, and immunizations. This includes such diseases as typhoid, diphtheria, whooping cough, smallpox, tuberculosis, and venereal disease. Some of these diseases can be practically eradicated and others reduced to a minimum.\textsuperscript{11} If all areas were adequately staffed with public health departments, this goal could be achieved much more quickly than otherwise.

Control methods include prevention through immunization programs. Whooping cough, diphtheria, smallpox, and tetanus are the diseases for which immunization is most commonly provided. All can be provided in the first year of life. If physicians report all infants not immunized by them to the health officer, it is possible to contact them and have them immunized at well-child clinics. By obtaining almost complete coverage, such diseases can be eliminated as a threat to health. In the program to

\begin{itemize}
\item \textsuperscript{10} Krohe, \textit{op. cit.}
\item \textsuperscript{11} Kilbourne, \textit{op. cit.}, p. 6
\end{itemize}
control communicable diseases, health nurses in Montana made a total of 6,513 visits in 1942.\textsuperscript{12}

In the control of tuberculosis, local health departments cooperate with the State Division of Tuberculosis Control in the State Board of Health and the Montana Tuberculosis Association, a voluntary agency. The annual report of the Tuberculosis Association for the year ended March 31, 1951, showed encouraging progress in this program. In the period from 1940 to 1950, the death rate had been reduced from 40.2 to 19.4 per 100,000. The highest rate was reported in counties with a large Indian population and in industrial areas. Of the 45,272 persons X-rayed in 1950 under the tuberculosis X-ray program, 1,243 persons, 2.7 percent of the total, were referred to private physicians for further examination. Of the 460 known active cases at the end of 1950, 234 were being treated in hospitals and 186 were in private homes.

Recommendations made in the annual report of the Tuberculosis Association included:

1. Chest X-ray of all persons over twelve years of age.
2. Follow-up on 100 percent of cases and better supervision of active tuberculosis cases which "can be best supplied with the provision of adequate full-time local health services."
3. Expanded program of health education.

\textsuperscript{12} ibid., op. cit.
Excellent cooperation was reported given by public health nurses "upon whose shoulders is placed the burden of most supervising duties performed".\(^{13}\)

In the control of venereal diseases, the health department is cooperating in a national program to check diseases which have "widespread social and moral, as well as health implications". The law requires physicians to report cases of venereal disease to the health officer. Every effort should be made to discover cases and provide treatment leading to complete cure. Drugs for the treatment of these cases are available to health departments and private physicians through the State Board of Health.\(^{14}\)

Heart disease is the disease which now exacts the greatest toll of human lives. It killed one out of three Montanans who died in 1940. While this is not a contagious disease, modern scientific information indicates that it may be a preventable disease. One of the greatest causes of heart disease is rheumatic fever which, in turn, is often associated with certain streptococcal infections and with diphtheria, influenza, and syphilis. If public health activities can result in control of these diseases, a decrease in heart ailments may be

\(^{13}\) Montana Tuberculosis Ass'n., 34th Annual Report for the Year April 1, 1950 to March 31, 1951

\(^{14}\) Kilbourne, op. cit., p. 6; Montana Session Laws, 1919, ch. 106, sec. 2
expected to result.15

Sanitation. Local health officers must make investigations of establishments dealing in food and drugs as directed by rules and regulations of the State Board of Health. In full-time health departments, this function would be performed by the sanitarian. The trained sanitarian will evaluate food handling establishments in terms of the following: cleanliness of dishes and utensils, lighting, ventilation, cleanliness of kitchen and dining room, clean clothing for employees, rest rooms, good refrigeration, cooking of food, no open display of unwrapped food, handling of utensils, and absence of insects and rodents.16 Food handling establishments include bakeries, meat markets, locker plants, restaurants, grocery stores, taverns and school lunchrooms. Sometimes food handlers' schools are held to teach sanitary care and handling of food.

Tourist camps, hotels, and trailer courts are inspected in terms of proper water supply and sewage, garbage, and refuse disposal. Lighting, heating,

15. G. D. Carlyle Thompson, One Out of Three Montanans Die of Heart Disease, press release No. 32 (Helena: State Board of Health, Feb. 22, 1951)

ventilation, and sanitary facilities of schools are inspected.17

Still another function in which the sanitarian helps protect the health of a community is through inspection of the milk supply. "Milk is an excellent food for man, but it can also act as a perfect food for disease-producing bacteria if it is not made safe by pasteurization". Various diseases such as undulant fever, tuberculosis, septic sore throat, diphtheria, scarlet fever, and typhoid fever may be spread through milk from infected cows or through handling of milk by persons who are carriers of the disease.18

Many people in rural areas do not care to bother with pasteurization of milk. However, the sanitarian can provide information on very simple procedures for pasteurizing milk for home consumption.19 With a laboratory service available through a local health department, people may have their milk tested for bacterial. Should the need be shown by such tests, people may adopt the practice of pasteurization as a safeguard against contamination.


18. Elton M. Andrew, Pasteurization of Milk Urged for Farm Communities, Press Release No. 36 (Helena: State Board of Health, April 13, 1951)

19. loc. cit.
Closely associated with this function of milk sanitation is the work of the State Veterinarian or his deputies who must test annually each dairy herd for tuberculosis and report to the State Board of Health.\textsuperscript{20}

In towns and cities with water and sewage systems, the sanitarian will urge people to connect up with the public sewage system to eliminate dangers of water pollution, fly and vermin infestation, and disease.\textsuperscript{21} In rural areas he will advise farmers and residents of small towns on proper location and construction of cesspools, septic tanks, wells, and water supply systems. Dangers of sewage disposal contaminating the water supplies are pointed out where cesspools and septic tanks are used.\textsuperscript{22}

Other areas where improvements in sanitation may be effected through the efforts and services of a sanitarian include garbage disposal, rat problems, dead animals, flies and mosquitoes, and agricultural use of chemicals for weed and insect control.\textsuperscript{23}

\textsuperscript{20} Montana Session Laws, 1911, ch. 130, sec. 6

\textsuperscript{21} G. D. Carlyle Thompson, Private Wells, Privies Can Be Health Danger, Press Release No. 38 (Helena: State Board of Health, May 17, 1951)

\textsuperscript{22} H. B. Foote, Rural Sewage Disposal and Rural Electrification, Press Release No. 3 (Helena: State Board of Health, January 5, 1950)

\textsuperscript{23} MacDonald, op. cit., p. 3
Vital Statistics. The State Bureau of Vital Statistics was established in 1907. In 43 years of operation it had accumulated 765,000 records including 475,000 births, 220,000 deaths, 55,000 marriages, and 15,000 divorces. All births, deaths, stillbirths, marriages, and divorces are reported to the National Office of Vital Statistics.

Deaths are classified and reported to various agencies such as deaths from communicable diseases to the Division of Epidemiology, tuberculosis to the Division of Tuberculosis Control and the State Tuberculosis Association, silicosis to the Division of Industrial Hygiene, and traffic accidents to the Highway Patrol. Illegitimate births are reported to the child welfare services division.

One of the functions of a local health department is to keep a copy of birth and death certificates. Since the cause of death is shown on the certificate, an analysis of these certificates will prove an excellent guide for the health officer in determining mortality causes and rates and the health problems behind them. Such

24. Montana Session Laws, 1907, ch. 110

analyses are made on the state level but should be augmented by local studies with subsequent public health programs directed toward a remedy of problems revealed.
CHAPTER VI

SCHOOL HEALTH

Introduction. In any consideration of public health services, the school must play a significant role. The concept that the school's only function was training in the three R's has long been obsolete. Modern philosophies stress the importance of viewing and training the "whole" child in the broadest sense.

We are engaged in a statewide program for testing and inventorying the mental capacities, qualities, interests, and progress of the child. If we are to stress the "whole" child, it should be important to inventory and evaluate the health status of the child with a view toward progressive improvement. In striving to attain this goal, public health and school personnel should merge their health activities into concerted action.

School health is almost invariably approached with a consideration of three major areas of action. Each of these three including healthful environment, health services, and health education will be considered in this chapter.

Health Environment. The environment as it affects the health of pupils is made up of two factors. The
physical plant as one factor should be constructed with a view towards health requirements. In Montana, school districts planning construction of a new building must submit building plans for approval to the State Board of Health showing method of heating, ventilating, plumbing, and sanitary arrangements.¹

As far back as 1914, Hoag and Terman stressed the importance of cooperation between health officials, school architects, and sanitary engineers with the statement:²

It would be hard to overestimate the injury that may be wrought in three-fourths of a century by a poorly lighted, ill ventilated or unsanitary building of twenty-five rooms. Within that time thousands of children will have been subjected to its unwholesome influence. The resulting sickness, ill health, and death would appall us, if it were possible to estimate it.

Fortunately, much progress has been made in improving the design of buildings to meet health needs. School administrators in the state meet to discuss good and weak points of building construction. Experts who have studied technical aspects are called upon for advice and suggestion. Architects are becoming more experienced in approved modern construction. As a result, modern buildings tend to provide for good lighting, ventilation,

¹ Montana Revised Codes, 1947, sec. 69-110
² Ernest Bryant Hoag and Lewis M. Terman, Health Work in the Schools (Chicago: Haughton Mifflin Co., 1914) p. 9
sanitation, and safety. Extensive construction in recent years has vastly raised the school environmental standards of Montana, but many relics of the past will continue to perpetuate the hazards described by Hoag.

Administrators generally recognize the importance of the custodian in achieving a healthful environment. The Metropolitan Life Insurance Company emphasizes the role of the custodian in maintaining a (1) good appearance of the school plant, (2) health protection through guarding against germs in dust, food, fountains, washrooms, and toilets, (3) heating and ventilation, and (4) safety. A casual observation of several school plants often reveals the pride of the custodian in the maintenance of the building. A specific measure for improving janitorial services was recently recommended to a group of administrators by a school-supply salesman. He pointed out the advantages of having custodians attend schools which are conducted in the state for such personnel during the summer.

The school lunchroom serves pupils which in some schools far exceed the number of people patronizing public eating establishments. In areas where a sanitarian is employed it is one of his functions as inspector of

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food handling establishments to inspect school lunchrooms and to offer suggestions for improving and maintaining maximum sanitary conditions. Lunchroom personnel should be expected to attend schools conducted in the area for food-handlers.

The second environmental factor affecting the health of pupils is that of teaching personnel. It is a generally accepted fact that teachers themselves should be in good physical health. The law requires each applicant for a certificate to teach to present a health certificate signed by a physician.4

The nagging, scolding, domineering, or emotionally unstable teacher can seriously affect pupils. Ideally the teacher should be firm but kind, sympathetic but exacting, and friendly but reserved. Sick leave should be provided by school boards to discourage the presence in school of teachers who are ill and may have undesirable effects on pupils.5

Public Health Services. In order that health services may function most effectively in a school, there needs to be a good record system, health appraisal of pupils, a persistent follow-up on matters needing

4. Montana Revised Codes, 1947, sec. 75-2501
5. Hoag, op. cit., p. 286
correction, and the cooperation of all persons involved.

The State Board of Health is seeking to standardize a Cumulative Health Record form which is supplied free upon request to the schools. A Health Information form is also furnished to be filled out by parents and returned to school officials who transfer the information onto the cumulative record. The results of medical examinations, and screenings together with any new information pertaining to the health of the child are added to the record from time to time.

Parents have an opportunity to observe any deviations from normal in the child. If symptoms of communicable diseases appear, the child should be kept home from school for the welfare of the child as well as of other children.

The teacher plays an important role in the health service program. She observes the child daily and should report defects, disorders, and cases of illness to the administrator in charge. She can also save valuable time of health personnel by performing simple but useful screening tests. By screening is meant inspection of pupils to seek out cases that deviate from normal and report them for further examination by the health nurse, health officer, or private physician. With a little
guidance, teachers can readily screen pupils for deviations in height and weight progress, posture, skin and scalp, teeth, speech, and hearing. Some vision defects can be revealed by use of the Snellen vision-testing chart and by observation of such symptoms as squinting and twitching of the eyes. The State Board of Health furnishes charts and a special bulletin on communicable diseases to aid teachers in their detection and control.

The nurse assists the teacher in developing skill in observation, helps with screening tests, interprets findings to parents and teachers, develops desirable school-home relationships, consults with the health officer and physician, and arranges for needed services with local agencies for children of indigent families. On the nurse rests the function of follow-up on cases needing remedial action, the importance of which cannot be stressed too much. The Gallatin County Health Department reported for the year 1948 that the school health program was the heaviest service carried by the nurse. She visited each rural school at least twice a year, gave

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7. State Board of Health, Control of Communicable Diseases Among School Children, Bulletin No. 45 (Helena: State Board of Health, 1947)


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immunizations and patch tests for tuberculosis, made audiometer tests for hearing, and discussed health problems with teachers. Each town school was visited once a week. Home calls were made to school children referred by their doctor or teacher and on request of the family.9

Where a full-time health officer is employed, an effort should be made to provide a health examination for each child at least four times at spaced intervals throughout his twelve years of school. Dr. B. E. Kilbourne, county health officer for Big Horn County, has stressed the importance of adequate records in expediting examinations. He has indicated that by quickly glancing at the cumulative record form, the physician can tell if any area should receive special attention. For younger children, where records are incomplete, the examination requires about fifteen minutes. For older children with adequate records, the time can be cut in half. It is important that parents, especially of the younger children, be present for the examination in order that the doctor may consult with them. Here too the nurse may help by taking more time to explain details left in doubt by the

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The purpose of the health examination is to provide a health inventory for the child at a given time. Authorities are generally agreed that it is not to be diagnostic or remedial. The health officer discovers conditions which call for further attention. Parents are then urged to take the child to the family physician who makes the diagnosis and prescribes remedial treatment.

The function of the school administrator in the health program is to conduct a public relations program that will secure the support of the public; he will provide for conferences between parents, teacher, and the health nurse; he will provide for screening, inspection, and referral by teachers; and he will cooperate with public health personnel in providing space and facilities for examinations, immunizations, and conferences.

Where an organized public health department has been functioning, most pupils will have been immunized for certain contagious diseases prior to entry in school. However, immunizations should be performed in schools at intervals to provide needed booster injections and to take care of pupils not contacted previously.

Health Education. The importance of health education

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10. City County Health Department, Gallatin County, Annual Report, 1948 (Bozeman; City County Health Department, 1948) pp. 12, 13
is brought into full focus by the following statement in the report of the National Committee on School Health Policies: 11

It has been stated that thousands of lives could be saved annually and thousands of people could be made happier if our present knowledge of health and disease were fully utilized.

Considerable emphasis has been placed in recent years on the part of the school program dealing with health and health education. The American Association of School Administrators published a yearbook in 1942 entitled Health in the Schools. In 1950 the American Association of Elementary School Principals published a yearbook on Health in the Elementary School. The State Department of Public Instruction in recent years has had a staff member seeking to develop a functioning health and physical education program in the state. Certain standards and requirements have been established. 12 One should not be discouraged if results have not been too spectacular since curriculum changes do not develop overnight. There are scheduling difficulties, curriculum adjustments, space and equipment problems, and training of


12. Time allotment required: rural elementary schools 120 minutes per week; other elementary schools, grades 1 to 3, one fifteen-minute period daily; grades 4 and 5, one twenty-minute period daily; grades 7 and 8, one thirty-minute period daily; high school, grades 9 and 10, three forty-five minute periods per week.
personnel that take time to overcome. Through the efforts of the State Department of Public Instruction, school administrators have at least become aware of the role which health and physical education is assuming in the curriculum, and in many schools good programs are in operation.

It is impossible to segregate education strictly from the rest of the health program. The doctor in answering questions or giving advice during the examination is teaching health, the nurse who goes into the home to advise parents regarding the child, is teaching. The teacher who required a child to chart his own height and weight on a graph is teaching for she impresses on that child the importance of knowing whether or not he is gaining weight and not merely what he weighs at a given time. The physician who confers with teachers after an examination is teaching.

In the elementary grades, health instruction may be integrated with other work since one teacher has charge of a group of pupils throughout the day. It may also be taught as a separate subject. There are now several health textbook series published for all the grades that will serve as a guide to the teacher in adapting her instruction to grade levels and avoiding undesirable duplication.
In high school where departmentalization prevails, health instruction is generally being given in one of three ways in Montana, as reported by administrators at the administrators' conference held in Great Falls in 1951.

1. It may be provided through other subject fields such as science, physical education, and home economics.
2. One day a week may be devoted to health in the physical education program.
3. A regular class may be scheduled five periods per week for a semester with credit given towards graduation.

The objectives to bear in mind in any health education program should include the following:

1. Give students scientific knowledge on which to base critical judgment of much of the current quackery and misleading advertising.
2. Teach pupils to distinguish between fact and fallacy regarding personal and community health problems.
3. Teach facts about diseases and their causes, first aid, care of sick, and care of the human body.

The fact should never be lost sight of that health education to be of any value must be functional, that is, it must be incorporated into the daily habits and behavior of the individual. Knowledge, unless put into practice, is perhaps more useless in health matters than in most others. Public health personnel coming into the school carry great prestige with pupils and can do much to make health education functional.

13 Ibid., pp. 358, 359
Several barriers to effective health teaching, which were listed in Public Health Reports, might be used by teachers in a critical self-analysis aimed at exposing fallacies in thinking and techniques of teaching.

1. The belief that most peoples' living habits cannot be changed by educational means.
2. The belief that anyone who knows his subject can teach it.
3. The belief that the chief business of teaching is imparting information.
4. The belief that teaching is mainly a matter of persuading people to do things which experts have decided are best for them.
5. The belief that there is one best method of teaching.
6. The belief that an adequate measure of health teaching is what the learners know about the subject.

The author of the report comments on the last of the six points by stating that "the only truly adequate measure of health teaching is not what a person knows or is able to do but what he actually does."14

A Sample School Health Program. The following is a list of activities recently found in the health program of one Montana school. The school was located in a county which had public health nursing services but did not have a full-time health officer.15 For that reason the


15. List provided by State Board of Health.
health examination program is not as complete as it might otherwise have been. The list is suggestive of activities that might be carried on in a school.

1. Inoculations given to pupils shown on the cumulative records as lacking immunization.
2. Children measured for height and weight twice a year.
3. Teachers conduct screening tests for sight and hearing followed up with notes sent to parents regarding defects.
4. High school physical education pupils receive credit for helping supervise recess periods.
5. Health and safety survey made by teachers involving toilets, lighting, humidity, and heating.
6. Pupils check temperature, open and close windows, and adjust seats.
7. Physical education program as part of curriculum.
8. Pupils eat at school lunch and are encouraged to drink milk.
9. Driver training course with sight, hearing, field of vision, and reaction time being checked.
10. Mobile tuberculosis X-ray unit scheduled.
11. Posters and class surveys used to encourage eating a good breakfast.
12. School pays for first aid and the first visit to the doctor, if necessary.
13. Physical examination given to all athletes and pupils participating in the physical education program.
14. Vocational guidance including health guidance.
15. Program of dental examinations sponsored.
16. Safety patrol organized.
17. Community health planning committee sought.
18. In-service training in health education provided by State University staff member.
19. Definite health class periods scheduled with instruction pointing toward application of knowledge gained.
20. Teachers keep health journals for interchange of ideas.
CHAPTER VII

DISTRICT HEALTH DEPARTMENT FOR NORTHEASTERN MONTANA

Area proposed. During recent years there has been a growing interest in establishing better health services in northeastern Montana. Meetings have been conducted involving several counties to discuss feasibility of organizing a district health department.

Under the enabling act of 1945, any group of counties may band together for this purpose. Several combinations of counties have been suggested. For the purpose of this study, a combination including Daniels, Richland, Roosevelt, and Sheridan counties is being proposed. See Table II for political factors of the area.

This area has a population of 30,452 people which forms a very satisfactory size considering that the State Board of Health has established 11,000 as a minimum and 50,000 as a maximum for a full-time health officer. The district consists of 7,380 square miles situated in such


3. County Clerk's offices, Annual Financial Statements, June 30, 1950. (Published by County Clerk of each County)
a manner that all parts would be within reasonable distance of a central point. The problem of selecting the site for the main office of the department would have to be determined by the district board of health. From the standpoint of convenience, however, Popular or Culbertson has perhaps the most ideal location, near a Missouri river bridge leading into Richland county, on east-west and north-south highways, and in the center of the most densely populated portion of the district. The most likely location for nurses in addition to the head office would be in Scobey, Wolf Point, Plentywood, Sidney, and Fairview. Culbertson would be ninety miles from Scobey and within fifty-five miles of the other centers.

Paved highways make most towns and cities in the area readily accessible. A number of sub-centers would need to be established in cities and larger towns where temporary office space could be provided for personnel. Table II shows the population of individual counties and also the number of schools and enrollments in each county. Rural schools are classified as those which do not have a high school and do not employ a superintendent.

Movement to organize strong leadership in Richland county during the last two years by a few interested citizens resulted in formation of a health council,
improved health services, and considerable interest in a district health department. In Sheridan county a council was also organized within the past two years which was instrumental in obtaining a public health nurse for the county. Since no qualified nurse was available, a registered nurse was granted financial assistance from the State Board of Health to get the necessary specialized training in public health work to qualify for the position.

As the climax to a series of meetings held in Bainville, Glasgow, and Poplar during 1950-51, a health council was organized in Roosevelt County which has circulated petitions to determine public support for a health department. Daniels County does not have a health council and has shown the least interest of the four counties in forming a district health department.

During the spring of 1951, a two-day meeting was held at Poplar at which all four counties together with Valley County were represented. Approximately seventy people attended, including personnel from the State Board of Health and State Extension Service, county commissioners, Indian agency personnel, school administrators, public health nurses, and leaders of various community organizations. At this meeting it was announced that the Indian Service, through the agency at Poplar, would contribute
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<td>and cities</td>
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<td>Fairview</td>
<td>Poplar</td>
<td>Medicine Lake</td>
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One inch equals approximately 22 miles

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*Populations marked with asterisk are for 1950. All others are for 1940. List includes principal population centers in 4-county area.

**Figure A**

**Map of Proposed Health District for Daniels, Richland, Roosevelt, and Sheridan Counties**
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<thead>
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<td>Physicians</td>
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<td>Sidney (5)</td>
<td>Wolf Point (2)</td>
<td>Plentywood (3)</td>
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<td></td>
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<td>Sidney (69)</td>
<td>Wolf Point (27)</td>
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<td>of present beds or</td>
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<td>provided under new</td>
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<td>Poplar (24)</td>
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<tr>
<td>construction)</td>
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<td></td>
<td>(2 hospitals)</td>
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<td>Poplar Indian</td>
<td></td>
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<tr>
<td>Tetanus</td>
<td>14</td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>30</td>
<td>20</td>
<td>23</td>
<td>23</td>
<td>27</td>
<td>212</td>
</tr>
</tbody>
</table>
substantial support, if a full-time health department were established in the area. The Northeastern Montana Medical Society, convening at the same time in Poplar, recommended that a doctor and dentist serve in each county with a health council to investigate needs, and study the best means for improving health services.\(^4\)

The following recommendations were made regarding education for a better understanding of health services:\(^5\)

1. Each county should survey its own needs and determine its problems.
2. Different organizations should be given specific information on health departments through use of films, pamphlets, talks, and discussion meetings.
3. Someone in each county should contact local newspapers to make sure they are using news releases sent out by the State Board of Health.
4. Vital local health news should be published weekly.
5. Local health councils should study local problems.

Health Resources and Needs. According to this estimate, there should be thirty physicians in the area which has approximately 30,000 people. There are only eleven dentists although one dentist is needed for approximately 1750 people. It is estimated that on the basis of trade routes and accessibility of dentists for


\(^5\) Ibid., pp. 7, 8
the population of this and surrounding areas, an additional nine dentists would be required.

When present contemplated construction is completed, there will be 170 hospital beds provided in the area, exclusive of the Indian Agency hospital at Poplar. Estimated need is from 3.5 to 5 beds per 1,000 people. At the upper ratio, 150 beds would be needed which would tend to indicate that hospital facilities will be adequate, especially inasmuch as the hospitals at Scobey, Sidney, Culbertson, and Plentywood will be of recent construction.

There are twelve incorporated cities and towns in the district of which ten have water and sewer systems. Facilities have recently been installed in Froid in connection with the water works provided for the new school plant. Interest has been shown repeatedly in the town of Westby in procuring a water and sewage system but no action to obtain it has been taken. It is a common situation for many residences to provide their own sewage facilities or use outdoor privies and wells, even though

6. County Clerk, Annual Financial Statement, 1950
7. Interviews with county officers
8. Interview with Gordon Anderson, Superintendent of Schools, Froid, Montana
9. Interview with county officers of Sheridan County.
the town has a water and sewage system. The Richland County health nurse reported that even in Sidney, the largest city in the district, there were many such residences. It was also reported by the Richland county health council that a community survey revealed many instances in which State Board of Health sanitation standards were not being fully maintained. Sanitarian services in the area could undoubtedly in time do much to improve this situation.

Table IV shows the immunization status of pupils in one of the medium-sized schools in the district. State Board of Health information forms were sent to parents of all pupils and information regarding preventable communicable diseases was tabulated for the 225 forms returned. The table indicates that a relatively large number of pupils have not been immunized for the four diseases for which immunization is commonly recommended. Tetanus immunization has not been common until recently, which accounts for the large number of pupils who have not been protected against this infection. The fact that 79 pupils have had whooping cough and nine have had smallpox, both diseases that can be very serious for their victims, indicates the possibilities for communicable disease control.

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10. Interview with Mary Alice Kehoein, Richland County health nurse.
Present Status of Public Health Services. Some degree of public health service is being provided in all counties in the district. All counties comply with the minimum legal requirement that a qualified physician be designated as health officer.

Daniels County employs a health officer at a salary of $75 per month. During 1951 a registered nurse from one of the local hospitals was employed at a cost of $500 to inspect all pupils in the schools of the county. Reports were sent to parents showing results of the inspection. A similar program was carried out three years earlier. 

Richland County employs a part-time health officer at an annual salary of $1,200, a public health nurse, and a sanitarian. The work of the nurse is mainly with school children. Preschool clinics are held during summer months where children who will be entering school in the fall are given medical examinations and inoculations. The school district or interested community organizations contribute one dollar per child for the doctor's examination. School health committees are organized to work out good school health practices and environmental conditions in conjunction with the nurse. This "grass roots" practice is

11. Interview with county officers, Daniels county
found to be effective in promoting widespread interest in
school and community health. The nurse makes visits twice
a year to the rural schools of which there are forty in
Richland county. She visits the city schools at Sidney,
Fairview, Savage, and Lambert one day a week.

A sanitarian has been employed since July 1, 1951,
after a vacancy in the position for several months. The
previous sanitarian, in addition to performing general
inspection duties, worked on a rat control program and
investigated the water from some well in the county.

A number of immunization clinics are held in vari-
cous centers of the county during the year which are con-
ducted by the health officer and the nurse.12

Roosevelt County prorates a salary of fifty dollars
per month among five physicians in the county for ser-

vices rendered as public health officer. No nurse has
been employed since 1942 although the position has been
budgeted for during the past two years and efforts have
been made to obtain one.13

The Fort Peck Indian Agency at Poplar employs a
field nurse for the reservation and is interested in ex-
panding its service to include a physician and dentist.

---
12. Interview with Mary Alice Rehbein, Richland
County health nurse.
13. Interview with county officers, Roosevelt County
The agent in charge of the agency would be willing, however, to participate in a district public health department rather than provide separate services. Special medical care is provided for Indians by doctors at Plentywood and at Poplar and by the Indian hospital located at Poplar for which $85,000 is appropriated annually. This hospital is operated by five nurses with one director of nurses and a doctor who is employed on a three-fourths time basis.14

Sheridan County divides a monthly salary of $100 between two physicians who serve as health officers.15 During 1951 the county has employed a public health nurse. Since the service is just beginning in the county, efforts have been directed mainly towards developing a program for the future. Activities have included aiding teachers with Cumulative Health Records, developing a dental health program, supervision of tuberculosis cases, aiding crippled children, teaching public health, and working with doctors on health problems.

Future planning includes a summer roundup clinic for preschool children, maternity clinics, health education in schools, adult health education, and a mental

14. Interview with John Johnson, Fort Peck Agency
15. Interview with county officers, Sheridan County
hygiene program.

Cost of Full-Time Health Department. One of the greatest objections to establishment of a full-time district public health department for the 4-county area is that the cost would be too great. In order to determine the cost to the area, it is necessary to prepare an estimated budget and then analyze the sources of revenue available to meet the budget.

The following estimated budget was arrived at through consultation with State Board of Health personnel. Salaries of personnel are somewhat higher than Merit System Council figures; but, with inflationary tendencies of the past year and the shortage of personnel it is believed salaries will have to be increased to attract qualified people. The figures represent those of a going concern and do not make provision for purchase of equipment.

The State Board of Health grants financial aid to local health departments under a specific formula. However, it provides that the maximum aid will not exceed thirty-five percent of the total budget. In the case of this budget, the aid would be limited by the above restrictions.

TABLE V

ESTIMATED EXPENDITURES
SUGGESTED DISTRICT PUBLIC HEALTH DEPARTMENT DANIELS,
RICHLAND, ROOSEVELT AND SHERIDAN COUNTIES

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health officer (1)</td>
<td>$9,000</td>
</tr>
<tr>
<td>Deputy part time health officer (3)</td>
<td>900</td>
</tr>
<tr>
<td>Health nurses (6)</td>
<td>21,000</td>
</tr>
<tr>
<td>Sanitarians (2)</td>
<td>7,000</td>
</tr>
<tr>
<td>Clerks (2)</td>
<td>4,400</td>
</tr>
<tr>
<td>Office rent</td>
<td>1,200</td>
</tr>
<tr>
<td>Telephone</td>
<td>300</td>
</tr>
<tr>
<td>Clinical supplies</td>
<td>500</td>
</tr>
<tr>
<td>Educational travel</td>
<td>200</td>
</tr>
<tr>
<td>Field travel</td>
<td>5,400</td>
</tr>
<tr>
<td>Printing, postage, and stationery</td>
<td>400</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$60,400</td>
</tr>
</tbody>
</table>
The Indian Agency at Poplar has offered an indefinite amount of financial aid if a district health department is established, but the minimum amount has been stated at $10,000.\textsuperscript{17}

Although school districts and voluntary agencies may contribute toward the cost of the department, they are not included in the following analysis of revenue sources since they have made no definite commitments.

TABLE VI

REVENUE SOURCES
SUGGESTED DISTRICT PUBLIC HEALTH DEPARTMENT DANIELS, RICHLAND, ROOSEVELT, AND SHERIDAN COUNTIES

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Board of Health (35% of budget)</td>
<td>$17,640</td>
</tr>
<tr>
<td>Fort Peck Indian Agency</td>
<td>$10,000</td>
</tr>
<tr>
<td>Local taxation in four counties</td>
<td>$22,760</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$50,400</strong></td>
</tr>
</tbody>
</table>

While the staff in the proposed budget is admittedly based on minimum requirements, it is worthy of note that the cost per capita of the entire budget for the district is only about $1.70.

Table VII presents a list of expenditures for special services in the four counties for the fiscal year

\textsuperscript{17} MacDonald, op. cit., p. 7

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<table>
<thead>
<tr>
<th></th>
<th>Daniels</th>
<th>Richland</th>
<th>Roosevelt</th>
<th>Sheridan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Extension Agent</td>
<td>3,966.96</td>
<td>4,308.31</td>
<td>3,975.82</td>
<td>4,194.72</td>
<td>16,445.81</td>
</tr>
<tr>
<td>Home Demonstration Agent</td>
<td></td>
<td>1,674.17</td>
<td>2,352.33</td>
<td>1,015.65</td>
<td>5,042.15</td>
</tr>
<tr>
<td>Health Conservation and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sanitation</td>
<td>930.75</td>
<td>1,320.94</td>
<td>697.59</td>
<td>1,241.75</td>
<td>4,191.03</td>
</tr>
<tr>
<td>Fairs</td>
<td>217.37</td>
<td>8,534.25</td>
<td>1,181.09</td>
<td>569.25</td>
<td>10,501.96</td>
</tr>
<tr>
<td>Medical and Hospital for</td>
<td>3,688.42</td>
<td>9,065.70</td>
<td>15,065.55</td>
<td>9,656.27</td>
<td>37,475.94</td>
</tr>
<tr>
<td>Indigents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Physician</td>
<td>2,135.00</td>
<td>6,286.70</td>
<td>4,201.00</td>
<td>1,986.20</td>
<td>14,609.90</td>
</tr>
<tr>
<td>County Library</td>
<td></td>
<td></td>
<td>3,639.73</td>
<td>516.16</td>
<td>4,155.89</td>
</tr>
<tr>
<td>County Nurse</td>
<td></td>
<td>756.71</td>
<td></td>
<td></td>
<td>756.71</td>
</tr>
</tbody>
</table>

|                              | 10,938.50 | 31,946.78 | 31,113.11 | 19,180.00 | 93,178.39|

* Net difference between fair expenditures and receipts.
ended June 30, 1951. It will be noted that expenditures for health conservation and a health nurse exceed only the amount spent for county libraries which were maintained in only two counties and in one of these for only part of the year.

On the basis of budget estimates for increased services in Richland and Sheridan counties, together with amounts equal to previous expenditures in Daniels and Roosevelt counties, the total to be spent for public health in the district for the year 1951-52 will be approximately $17,700. State aid will reduce the amount of the cost to be borne locally to approximately $13,450. Since the amount of revenue required to be raised by local taxation for support of a full-time health department would be only $22,760, it can be observed that for an additional expenditure of about $10,000 the entire district might enjoy full-time public health services.

Since the taxable valuation for the four counties in 1950 was $22,283,694, the amount of property tax to be levied over the district would be only one mill. In terms of taxes in specific counties, this would amount to approximately $4,000 in Daniels, $5,700 in Richland, $7,000

18. Interview with Mary Alice Rahbein, Richland county health nurse.
19. Interview with county officials.
in Roosevelt, and $5,700 in Sheridan. Only in Daniels and Roosevelt counties would this represent any substantial increase in taxes since Richland and Sheridan are already budgeting for special health services.

It should be pointed out, however, that budget estimates shown are for six nurses representing a ratio of one to 5,000. If the ratio was reduced to one to 3,000, which is recommended for rural areas, nine nurses would be required. This would mean an additional cost of about $12,000, some of which would be borne by the state and perhaps by the Indian Agency.

It should also be pointed out that state aid is limited by legislative appropriations and the number of counties receiving assistance. It should not be relied upon too strongly as a permanent source. Even without it, however, the local funds required would be less than two mills.

In comparing the local cost of the full-time department with costs of other services shown on Table VII, it will be noted that the amount is approximately the same as that spent for county extension and home demonstration agent services and only about double the amount
The amount spent for medical and hospital care of indigent persons was over $52,000. There might be some question as to how this figure would be affected by increasing the amount of health services. It is possible that additional cases acutely needing medical and dental care would be discovered and the cost to the counties of providing the care would increase temporarily. The result in the long run, however, should be to reduce the amount since cases would be treated in their early stages, thereby avoiding more expensive treatment later. It was also noted earlier in this volume that illness takes a far greater toll among low income groups. Since public health services reach people in all income levels, it might be expected that health standards would rise and the cost to the county for care of the indigent would decline.

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20. Figures obtained from county clerk's Annual Financial Statements of four counties.
CHAPTER VIII

SUMMARY AND CONCLUSIONS

It was aptly pointed out at the health meeting in Poplar May 31, 1951 "that public health services are protective, preventive, educational services to help all citizens obtain and maintain the best degree of health". Progress has been and is being made in Montana towards realizing these objectives as may be seen from the following summary of concrete achievements.

1. School health programs are developing.
2. Dental health is receiving greater attention.
3. Tuberculosis Control programs are being accelerated.
4. Premarital and prenatal blood tests for detection of syphilis are required.
5. Communicable disease control is spreading with newly created health service.
6. New hospitals are being constructed and all hospitals are now licensed.
7. Crippled children's clinics are held in regional centers.
8. Sanitation is being stressed.
9. Increased interest among Montana citizens in health problems is evidenced by formation of new health councils.

In seeking the realization of public health objectives, there are certain advantages in working through the medium of a local health department which may be summarized briefly as follows:

1. Frances H. Macdonald, op. cit., p. 1
district, public health services in Daniels, Richland, Roosevelt, and Sheridan counties. Typical services to be rendered and the cost to the people of the area have been listed in detail. The people will have to decide if these services are worth the cost. To do this they may wish to study needs further. Needs may be studied further through local vital statistics, sanitation surveys, and immunization and communicable disease studies.

It should be remembered, however, that in public health we are seldom in position to measure the entire end product. Much of what is done in health work blossoms forth only at some future date. The success of a chest X-ray campaign is not solely the result of the present educational drive, but the culmination of years of continued and persistent publicity and education.

Dr. F. L. Livingston, Director of the Division of Dental Health, Montana State Board of Health, has quoted surveys showing that 500,000 dentists working forty hours per week for fifty weeks a year would be required to care for present dental defects in children in the United States. Only 80,000 dentists are available to cope with this task. The only answer to the problem is education, and education is the greatest weapon of all public health workers in their efforts towards human conservation.
1. Local funds are spent more efficiently under the direction of an administrative health officer.
2. The cost of activities of the State Board of Health are high in local areas.
3. Local health activities are coordinated.
4. Health problems are constantly sought and solved before becoming large.
5. Screening and searching get more people to medical care when needed.
6. Water and milk supplies and public foods are safeguarded.
7. Communicable disease outbreaks may be checked.
8. Venereal disease and tuberculosis are sought out and brought under treatment.
9. Physical examinations of children with a follow-up program lead to healthier people.
10. Pregnant mothers and mothers of preschool children are advised.
11. Guidance and assistance are given to school personnel in health education.
12. Laboratory facilities may be provided for analyzing and diagnosing.

The trend toward increased health services in northeastern Montana, as well as elsewhere, is growing slowly. It has developed from the health council stage to a nurse, then a sanitarian, and may ultimately lead to a full-time department. Slow growth such as this is desirable because it builds a firm foundation of public understanding and appreciation that is not likely to be easily undermined by temporary difficulties. County commissioners have stressed repeatedly that they want ample assurance of popular support before pledging their respective counties to finance increased health services.

A formula has been given for providing full-time
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