

EVALUATION OF THE FOLLOW-UP SERVICES
FOR HEALTH REFERRALS IN SCHOOL HEALTH SERVICES
IN SELECTED OREGON COUNTIES

by

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CHAPTER I

INTRODUCTION

A. Background of the Problem

Education for healthful living is now generally accepted as one of the main objectives of any school curriculum. Among the most famous statements interpreting the relationship of health to education are those made by the Educational Policies Commission (6, p. 105), and the National Education Association (17, p. 7). However, educators and physicians, in joint statements have expressed deep concern regarding the present and future health of our society.

The relationship of health education to general education is defined in a statement by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association (20, p. 2) as follows:

Over many years the school's interest in health has increased and broadened. This was partly because of greater recognition of the relationship between health and successful living and partly because of changing concepts of education. Education has, more and more, discovered itself to be concerned with the full lives of children and the total environment in which they live, grow, play and learn.

There is also agreement among educators that the health status of students, to a major degree, determines the strenuousness of the educational program in which they may participate. The Commission of Health in Schools of the American Association of School Administrators makes a similar statement in its publication, Health in Schools (1, p. 144), which reads in part, "Until the school knows the health status of a student it is obviously impossible to plan with full exactitude his educational program." It is also recognized by authorities in education and medicine that information regarding the health status of students should permeate throughout the entire teaching staff if each individual pupil is to benefit to the optimum from the instructional program in school.

The media for appraising the health needs of the school-age child are the health examination by physicians and dentists, the health observation by teachers, and the health screening by teachers and nurses. These functions or responsibilities are a phase of the school health program commonly known as health services. School health services also include media for referring suspected or known defects to the attention of parents, medical, dental, or health personnel; and the necessary follow-up services in their correction or the prevention of further limiting defects.

The accepted principles and policies defining the responsibilities and functions for all persons concerned with school health services have been formulated jointly by educators and medical, dental, and health authorities. Examples of joint collaboration in school health are the previously mentioned Commission on Health in Schools, the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, and the Workshops of Study Commission of the National Council of Chief State School Officers (16, p. 8).

In Oregon the guiding principles and the established state, as well as the county- and local-level policies for school health services have been developed through similar channels. The regulations, policies, and the recommended procedures for health services in Oregon schools are outlined in a joint publication of the State Department of Education and the State Board of Health entitled Health Services for the School-Age Child in Oregon, 1958 (23, p. 12).

B. Definition of Terms

In this study the health terminology used is defined as follows:

1. "School Health Services"; the school procedures which

are established to (a) appraise the health status of pupils; (b) counsel pupils, parents, and other persons involved concerning appraisal findings; (c) encourage the correction of remediable defects; (d) help plan for the health care and education of the handicapped children; (e) help prevent and control disease; and (f) provide emergency care for the sick or injured.

2. "Health Referral"; to direct a suspected symptom or defect to the attention of parents, physicians, dentists, and others.
3. "Follow-up"; the health, medical, or dental services rendered to correct, remedy, or modify the defect so that the student may obtain optimum benefit from his educational experiences.
4. "Health Appraisal"; all of the measures, including screening and examinations, which might be used in evaluating the health status of the child, in supervising his growth and development, and in detecting any aberrations or abnormalities which might need attention. This is not to be interpreted to include definitive diagnosis of medical conditions.

C. Statement of the Problem

Out of the writer's responsibilities for the planning, organization, coordination, supervision, and evaluation of health programs in Oregon schools, there developed a special interest in evaluating the effectiveness of the follow-up services being rendered to referred health defects in school health services. The evaluation of this problem also includes the extent to which recommended health service procedures are actually being put into practice in Oregon schools.

D. The Purpose of the Study

The purpose of this study was to appraise the following health service procedures and factors:

1. The nature and extent of follow-up being conducted for health referrals in selected counties.
2. School personnel involved in referring health defects and the extent and the nature of referrals being made by these people.
3. Types of defects referred from the health screening program in certain Oregon elementary, junior, and senior high schools.
4. Data relating to the recording of both the referrals and the follow-up data on the Oregon School Health

Record Card (24, p. 2).

5. The type of school health services, including organization and extent of the health, medical, and dental services available to Oregon schools.
6. The type of health services and procedures existing in counties and communities where the study may show a good channeling of information from the school to the parents, health departments, physicians, dentists, and others and back to the school.
7. To obtain objective data and make the information available to the agencies, organizations, and individuals who are involved in the overall program to further the health services for the school-age children in Oregon.

E. Hypothesis

The hypothesis upon which this study was undertaken, was, that in the referral of pupils for suspected health defects, teachers do not in many instances, know if any medical, dental, or health follow-up has been done.

F. Sources of Information

The data for this study were secured from two sources: (1) four selected counties in Oregon. These counties were selected on the basis of having one county

representative of each of the four generally recognized geographical subdivisions of the state; eastern Oregon, southern Oregon, central Willamette Valley, and the metropolitan area on the fringe of the city of Portland. The four counties were representative of the geographic characteristics of their areas. Each was typical of the socio-economic organization and conditions found in its area of the state. Also, the organization of the school system and of the health department was comparable to that of the neighboring counties in each area. A total of 143 elementary and secondary schools from these four counties returned the survey questionnaire. (2) The other source of data was the health department in each county. The health officer and supervising nurse were interviewed in each of the four counties.

G. Delimitations of the Study

This dissertation is concerned with the health appraisal aspects of the school health services program. It does not include any of the following health service procedures:

1. Diagnostic procedures.
2. Communicable disease and skin infection referrals.
3. Evaluation of the program in any of the other thirty-two counties.

4. Health education components of school health services which are usually associated with indirect health instruction in the total school health education program.

CHAPTER II

RELATED STUDIES AND LITERATURE

The extent of literature, including any studies which may have been conducted, relating to the specific aspects of health services programs included in this study is decidedly limited. Most of the studies have been concerned with such phases of the total school health program as: the duties and functions of health nurses; the areas of health topics included in the health instruction programs; studies of the extent of compliance to various state laws or regulations relating to the teaching of health, hiring of teachers, and teacher qualifications. Practically all of the studies have been geared to the secondary school level. Other studies have emphasized the health education teacher preparation programs in colleges and universities.

Considerable information and literature also are available which discuss the job, training, and school-community functions of school health nurses. Similar information is also available describing the job of the public health nurse who also functions as a school nurse.

Literature reviewed in this chapter deals directly with the stated purposes of this study.

A. The Role of Personnel

To obtain an overview of how the personnel involved in the school health program perceived their primary responsibilities, the writer reviewed a study by Cook (5, pp. 144-145) which showed that teachers, at least on the secondary school level, perceived themselves as having few responsibilities in the area of health services, especially above and beyond their responsibilities in first aid and emergency care of the students. These teachers perceived their main responsibility to be health teaching. School principals, on the other hand, attached more value and importance to health services than did the teachers. In this study the principals perceived health services to be the first responsibility of the teachers with health teaching and the healthful school environment being other major responsibilities in that order.

The School-Community Projects conducted by the W. K. Kellogg Foundation (28, p. 91) from 1942 to 1950 showed a major problem to be that of the teacher not understanding her role in the school health services program. Summaries of the many projects conducted under the auspices of the Kellogg Foundation showed that preparation for those duties of the teacher concerned with the health of pupils is not pointed toward out-of-school

activities and services. The studies further point out that teachers in training should have practice in screening pupils to discover gross defects of sight and hearing, and to identify the borderline cases that need to be referred to doctors, dentists, and other specialists for diagnosis, follow-up, and treatment.

A study conducted by the United States Office of Education in cooperation with the Public Health Service of the Federal Security Agency and the American Medical Association (11, p. 24) of the status of school health services in cities having a population of 2,500 or more in the Continental United States in 1952, showed that only 42.4 per cent of the 3,430 cities returning the questionnaire had policies or established methods for referring health defects "through the family to the family physician." However, 85.3 per cent had a method of referring health defects from the teacher to the school health service. The "school health service" in the study was interpreted to include the nurse (whether employed by the school or functioning as a public health nurse with the responsibility for school health), a public health physician, and other health specialists functioning under the auspices of the school health service department.

One of the expressed concerns in the present study is the extent of physician participation in the school

health program. In order to have information on the scope and the extent of such programs on a nation-wide basis, a review of related literature revealed a study made by the Bureau of Health Education of the American Medical Association (3, p. 25). A questionnaire was distributed to the secretary of each of the organized medical societies in the 48 states and territories. From a total of 1,003 returns, the findings revealed that no arrangements had been developed in 43 per cent of the communities represented by which recommendations from private physicians could be channeled to schools. These recommendations generally consisted of information regarding special health needs of children, variations of the school program of individual children to meet these needs, and recommendations for special education of children with serious health problems. A recommendation resulting from this study (3, p. 47) stressed the formation of a committee or council at the school-community level to give attention to school health problems and provide a simple, orderly way of co-ordinating the efforts of all of those concerned with the health of the school-age children.

The American Child Health Association (2, p. 5) in 1926 organized what is known as the School Health Study. Its purpose was an evaluation of the school health program as carried on in the major cities. In the fifth phase

of this study, which was concluded in 1933, an attempt was made to appraise the effectiveness of school health services, including physical examinations by physicians. This study concerned itself most with the extent of understanding that each individual had of his job, particularly the teacher and nurse (2, p. 81).

The study indicated that the extent of information available to the teacher and nurse regarding the total health status of the child was inadequate. This was interpreted to be due to poor communication with the parent. The study also indicated a need for keeping teachers posted on up-to-date books, journals, and periodicals in the field of health.

B. Evaluation of School Health Programs

Nyswander (21, p. 45-56) and associates, in making a study in the Astoria District in New York, investigated and appraised the overall school health services program with the view of establishing or initiating pilot programs to improve practices where efficiency might be impaired. In this study, an evaluation was made of those children who had been referred for follow-up of a health problem after physical examination by school physicians.

A selected group of 382 children, including 188 who were entering school for the first time, and 194 children

who had been specially referred as a result of the physical examination by the physicians, were in the follow-up phase of the study. Of the total of 382 children, 255, or 62 per cent, were followed by the nurse. That is, the nurse maintained continuous contact with the parents and physicians on what was being done in regard to the health defects that were referred.

In 127 out of the total of 382, or 40.2 per cent, findings showed that of the entering children, only 25, or 36.1 per cent, had received professional attention. Of the specially referred children, 25, or 45.5 per cent, had received professional attention.

The Astoria study showed that even with follow-up by a nurse, only 62 per cent of the 255 who were given special follow-up service by the nurse received professional attention while 42 per cent of those who were not followed by the nurse received professional attention.

Another important factor in this study was that the parents of 206, or 81 per cent, of the total 255 children who were followed up by the nurse, were present at the medical examination. Another analysis in the study showed that 115, or 56 per cent, of those children whose parents had been present at the examination had received professional follow-up while only 22, or 47 per cent, of 49,

the total of those children whose parents were not present at the examination, had received professional follow-up.

One very important feature in the Astoria Plan was that a record was developed by which the information from the physicians' examinations was recorded on a card which the nurse used in her follow-up with the parents. The writer is of the opinion that the special form agreed upon at the state level is not being used in many of the Oregon communities to get data from the doctors and parents back to the school following a referral.

Bech (4, p. 35) conducted a study to analyze the administration of the health examination program in Oregon public schools and found that the follow-up program was rather lax in Oregon schools. His study showed that of a total of 125 schools which were included in his evaluation, 15 per cent of the schools did not record the results of referrals on the Oregon School Health Record Card. Although his study did not include the number or per cent of parents present at physical examinations which may have been conducted in the schools, he does recommend that the presence of parents at the examinations would undoubtedly result in greater cooperation and help from the home in the follow-up or correction of defects.

C. Selection of a Criterion

In order to establish a criterion for accepted standards for school health services, the writer has reviewed literature in which joint statements by educators and doctors appear. The most commonly accepted guidelines or recommended standards for school health education, including health services, are those which have been prepared by the Joint Committee on Health Problems in Education (18, p. 13). In a publication describing the health appraisal of school children, the Joint Committee states that the school teacher is a key person in the health appraisal process no matter how adequate and available the specially trained personnel might be. The teacher is always present and in constant contact with the children throughout the day and, since the onset of a communicable disease and the development of physical defects do not await the nurse or the physician, the teacher's contribution to the total health of the school-age child is therefore vital. When nursing services are not available and when contact with the nurse is difficult or her visits to the school are infrequent, the importance of the teacher's role in the total school health program is greatly increased. The teacher's part of the health appraisal is not too difficult. It needs to be

understood that she is never called upon to make a medical diagnosis. Her real role is that of keen interest and close observation.

Repeated health inspection and the use of certain screening tests, along with continuous daily observation are the techniques to be used by the teacher. These will enable her to recognize those children who, because of changes in appearance or behavior, should be referred to and be carefully examined by the physician, dentist, or others as necessary.

The Joint Committee on Health Problems in Education (20, p. 27) states that the teacher's work in the health appraisal program will only be successful when her referral results in subsequent medical or other specialized attention for the children who are referred. Teachers, therefore, are professionally obligated to do all they can to bring about better investigations and follow-ups of referrals.

Every school has health policies. Written or unwritten, consistent or inconsistent, in or out of tune or touch with the best-informed professional viewpoint, these policies affect the present and future welfare of all school personnel, teachers as well as pupils. If a school is to make the greatest possible contribution to the continuing health and welfare of its pupils

throughout their whole lifetime, it should formulate and apply health policies consistent with the best thought and practice in this field.

Such policies give direction and guidance to the efforts designed to detect, protect, and improve the health and general physical welfare of children and youth. Policies also evolve from accurate and certain understanding of the health needs of children and the objectives of education. Health policies for schools which are developed through the joint efforts of educators and physicians are free from fad and prejudice. They are subservient neither to unproved speculation nor heavy-handed tradition. The recommended policies for the nation's schools, as well as the schools in Oregon, have grown out of experiences and health needs of schools and are guided by expert judgment on the part of recognized authorities. They also include statements of specific goals and procedures for reaching them in relationship to the total educational program.

The National Committee on School Health Policies (15, p. 15), in summarizing the National Conference for Cooperation in Education, points out that although the ideal school health service program is based on accepted standards formulated by education and medicine, it will be adapted to the community in which it operates and,

therefore, will be influenced by local customs as well as by the variety of professional personnel and other resources that are available. Another factor of consequence is the extent of local awareness of the health needs of children and youth. In the National Committee's report on suggested school health policies, the role of the teacher and the need for follow-up and interpretation are given first consideration.

This report further indicates that in order for the school to meet the educational and the health needs of children and youth, it is essential to secure information concerning their present and past physical, mental, and emotional health status. The report continues that such information may be obtained in part from the parents and pupils. Other sources of information are observation and screening by school personnel, including nurses, and examinations by professional personnel, such as private practitioners or by physicians employed by schools or health departments. The report also indicates that in order for this information to be gathered most easily and put to its best use, all personnel concerned need to cooperate with each other on the basis of well-established policies and procedures which are familiar to everyone concerned. The Suggested School Health Policies report stresses continuous observation by teachers. It states

that good teachers are skilled observers of children because they recognize that health of pupils affects their ability to participate in the school program. Teachers are in a strategic position to note changes in health status. Oftentimes, seemingly insignificant observations lead to the discovery of serious conditions which may have been previously undetected.

In continuing the discussion of the role of the teacher, the Report on Suggested School Health Policies indicates that the importance of observations by teachers who understand how children and youth grow and develop and who know the appearance and behavior characteristics of health cannot be over-emphasized. Teachers frequently see deviations that are not noted by parents. The day-by-day observations of changes by teachers may be more important in appraising health status than the occasional isolated examination of a physician. Since health status may change abruptly and unexpectedly, the fact of a recent examination or of recent good health should not suppress a teacher's concern when she suspects something may be wrong with a child's health.

The screening tests most commonly used are those for measuring growth and for determining acuity of vision and hearing. Recommendations also provide that these tests should be conducted annually, preferably at the

beginning and at the end of each school year. Dental examinations, the appraisal of posture, nutritional status, and also behavior characteristics are generally included in the recommendations from the various national reports and suggested standards.

According to the Suggested School Health Policies Report (15, p. 19), the referral, follow-up, and interpretation of the need for treatment are a most important aspect of school health services. Without such efforts, the identification of health problems is of little value. Follow-up requires proper interpretation of health conditions to pupils and parents and to teachers and administrators. The recommendations stress the need for the school to inform the parents regarding any need for medical and dental care. The liaison between the school and the home generally is the nurse. However, when nursing services are not available, or are limited, the communication between the school and the home is the responsibility of the teacher or the administrator, depending on the policy or procedure that is in effect.

It is important that parents be acquainted with the health needs of their children as revealed in school health records in order to seek needed medical care, plan diet changes, make alterations in daily routine, and take other necessary steps for improving the child's

health. To this end, the school should report regularly to parents on its observations of child health status and should notify them of any deviations.

The next fundamental phase of the health appraisal referral procedure is that of recording the suspected defects on cumulative health record cards. The guide, School Health Services (15, pp. 51-60), a publication of the Joint Committee on Health Problems in Education, of the National Education Association and the American Medical Association, strongly recommends that all health appraisal findings should be recorded on each pupil's cumulative health card. This card also should be an integral part of a pupil's school, or scholastic record, and accompany the pupil as he is promoted or is transferred from one school to another. Such cards help teachers understand the health problems of their pupils and are indispensable for effective health counseling in the follow-up on identified health problems.

The writer has made an interesting observation in reading the literature that stress is not made of the fact that actually two recordings are necessary on the cumulative health record card in the case of a detected defect. It seems to be taken for granted that, when a defect is suspected, a record is made on the school health record card that the defect has been referred to the attention

of the parents. The important factor that has not been emphasized is that an entry needs to be made on the health record card following any medical, dental, or other professional treatment or follow-up. This is one of the real concerns that the writer has in conducting the evaluation of the follow-up in health services and it may be that one of the real problems rests with the lack of understanding on the part of the teacher, and oftentimes the nurse, for seeing that this information is recorded on the health record card.

In further discussing the recording of health data, the guide, School Health Services (15, p. 59), states that the cumulative health card is the place to bring together all of the pertinent data concerning the pupil's health. Consequently, it will contain significant facts on the health history, the results of the teacher's observation, results of screening tests, and the findings of medical, dental, and psychological examinations. In addition to these, there should be notes that reveal what has taken place as a result of health counseling and other procedures. Here, however, no comment is made again as to who should record the findings of the medical, dental, and psychological examinations.

Consideration has also been given to the role of the cumulative health record cards by the World Health

Organization (29, p. 21). Consideration was given to the role of the cumulative health record cards by the Expert Committee on School Health Services of the World Health Organization. After pointing out the need for attention to the importance of records in helping children and youth to obtain and maintain maximum health within the limits of their potentialities, the World Health Organization presented the following principles:

1. Health records should be cumulative throughout the school life of the child. They should contain pertinent information regarding the child from the family physician, hospitals, and clinics. It is desirable that records show preschool health supervision be a part of the school health record card where this is possible. The record of health status during the school years can be of considerable value in guiding the child into the vocation for which he is most suited.
2. Health records should contain information on the preventive services (immunization), screening tests (vision and hearing), findings of private physicians or the school medical examiner, and recommendations for therapeutic measures.
3. Health records should show the progress the child is making in attaining health objectives whether this be the correction of a physical defect, receiving adequate medical supervision, or developing new habits related to health status.
4. All available data bearing on the growth and development of the child should be a part of the cumulative record.

D. Health Service Regulations in Oregon

It might be said that the health examination program

for Oregon schools was started in 1925 with the passage of a law by the 1923 Legislature which established a program of physical examinations in Oregon schools. This law went into effect in 1925. The law provided for an examination to determine defects of vision, hearing, breathing, dentition, or other obvious physical defects which would prevent or interfere with the normal education of the child. The provisions for health examinations as enacted in this law are still in effect on the basis of State Board of Education Regulations Pertaining to Health and Physical Education Regulations in Oregon Schools (22, p. 2). These regulations require the Superintendent of Public Instruction to prescribe, with the advice of the State Board of Health, a program of health examinations of pupils in the elementary and secondary schools in the state. (p.118, Appendix)

The State Department of Education and the Oregon State Board of Health have outlined a program of health examinations on the basis of the State Board of Education Regulations. The health services program for Oregon schools is outlined in the manual, Health Services for the School-Age Child in Oregon (23, pp. 12-29). The responsibilities and relationships of the two legal state agencies are defined as follows: (23, p. 12)

HEALTH APPRAISAL OF THE PUPIL

This section of the manual outlines a program of health examinations which is recognized as meeting the requirements prescribed by the Superintendent of Public Instruction with the advice of the State Board of Health in accordance with Section B 1, State Board of Education Regulations Pertaining to Health and Physical Education Programs in Oregon Schools, June 15, 1955.

Responsibilities and Relationships

The State Department of Education and the State Board of Health recognize mutual interest and responsibility for health examinations of Oregon school children. Both agencies appreciate the ideals which motivate health examination programs. Both recognize that limitations necessitate the development of programs which are realistic in terms of local facilities and situations. Both agencies believe, however, that certain minimum services are essential and should be provided.

Oregon law provides that the State Board of Health shall have direct supervision of all matters pertaining to the preservation of the life and health of the people of the state. Oregon State Board of Education regulations also require that boards of directors of all school districts shall provide programs of health instruction and physical education for all elementary and high schools of the state. To achieve the purpose of these regulations, the Superintendent of Public Instruction is given the duty to prescribe for, with the advice of the State Board of Health, a program of health examinations of pupils. County school superintendents and city school superintendents are made responsible for carrying out such a program. Section C, State Board of Education Regulations Pertaining to Health and Physical Education Programs in Oregon Schools, June 15, 1955.

The manual, Health Services for the School-Age Child in Oregon, clearly defines the role of the teacher and the

nurse in health screening. Primary emphasis is based on teacher observation as the basis for discovering health needs in the pupil at school. This also serves as a supplement to observation and care of the health needs of the pupil at home. Health observations at school enable the teacher to suspect acute or chronic illnesses and to note other deviations from the normal as they might develop. The teacher's opportunity for comparison of a child with others of the same age group makes these deviations much more obvious. The teacher also has a unique opportunity to appraise pupils because the proportion of waking hours spent by a pupil with the teacher is greater than that spent with any other adult during the school year and this affords an opportunity for extended observation. The role of the teacher is defined as that of an alert and interested observer.

The health service manual also stipulates that a health inspection of the pupil by the teacher is required during the first month of each school year. The health inspection is interpreted to be an integral part of teacher observation. The purpose of the health inspection is to screen pupils for disorders of vision, hearing, teeth, height, weight, or other external, obvious physical deviations which will prevent or interfere with the normal education of the child. The regulations also

indicate that appropriate entries are to be made on the Oregon School Health Record Card for all pupils in grades one through twelve.

Instructions in the health services manual stipulate that weight and height are to be recorded in the early fall and late spring in the space provided on the School Health Record Card. Vision and hearing are to be tested during the first month of school and whenever difficulty is suspected and also following absence from school due to some of the common childhood diseases such as measles or chickenpox. Observation and inspection of the mouth and teeth are to be included in the regular health inspection during the first month of the school year.

The directions in the health services manual also stress that general teacher observation of pupils is not limited to any particular period of the day but should be continuous as teachers move about and work with the pupils. There are many types of activities involving different skills, as well as variations and degrees of effort, which give the teachers an opportunity to note any changes in behavior and appearances.

The role of the nurse (either public health nurse or school health nurse) is described in considerable detail in the health services manual. The relationship between the teacher and the nurse is defined in a section

in the manual under the topic "Teacher-Nurse Conference." According to the recommendations, a teacher-nurse conference should be held at least once a year, at which time the health status of every pupil in the teacher's classroom is to be discussed and appraised. The teacher-nurse conference provides an opportunity for the following:

1. The nurse to assist the teacher with observations.
2. The teacher's observations to be evaluated.
3. The teacher to receive an interpretation of any medical findings and recommendations.
4. Teacher and nurse to learn about the special needs and problems of the pupil within and outside the school.
5. Each to learn about the progress and follow-up.
6. Both to agree on the next steps to be taken and by whom.

One of the most important features of the teacher-nurse conference is to decide on a course of action regarding those pupils who need to be referred for medical or dental attention. It is generally agreed between health and education personnel that, except in an emergency, a teacher-nurse conference should be held before referrals are made to the parents, especially if nursing services are available. One of the concerns of this dissertation is to evaluate how the teacher-nurse relationship is functioning in the various Oregon schools included in this study.

The role of the health nurse has been defined in school health literature as being that of a liaison

between the school, the home, the health department, and the doctor. Therefore, the nurse and the teacher may have to decide on one or more of the following possible actions regarding the referral of pupils:

1. Await the results of further observation of the pupil by the teachers.
2. Make adjustments in the school routine and environment.
3. Provide the pupil with special instruction and health guidance regarding his personal health problem.
4. Refer the pupil for audiometric, psychometric, or some other special test.

An evaluation of the follow-up services of health referrals is the primary purpose of this study. For that reason, the statement in the manual Health Services for the School-Age Child in Oregon (23, p. 26) is of special interest. It reads as follows:

The ultimate objective of health appraisal is twofold--to secure correction of defects in so far as possible and to provide the educational value of the experience. The success of such a program may be gauged by its contribution to the pupil's health education as well as by its direct value in protecting and promoting health. Diagnosis not followed by remedial action indicates not only failure to protect and promote health but also failure in the attempt at health instruction. To secure maximum benefit in either phase there must be an effective plan for follow-up.

Home visits by the public health nurse often are necessary to explain further the need for medical care, to demonstrate home care and to secure additional information which may be helpful in health guidance of the pupil. The number and frequency of such visits are determined by the nurse who must plan in relationship to the

total community program. When the nurse is actively following a case, progress information should be shared between the teacher and nurse.

If the pupil is to continue in or return to school before all recommendations for medical care have been fulfilled, the teacher should be given a clear interpretation of any recommendations which would affect the activities of pupil when in school. Only thus can the most advantageous adjustments in the child's environment and regimen be made and the teacher's participation in daily observation and health guidance of the pupils be effective.

If the services of a nurse are not available, and the need for follow-up is obvious, the teacher will of necessity have to assume the responsibility.

In defining the use of the Oregon School Health Record Card (23, p. 28), the manual Health Services for the School-Age Child in Oregon stipulates the following:

A card is to be maintained for each pupil, grades one through twelve. It is the teacher's record of the pupil's health status and it is to be kept near the teacher's desk for convenience in making entries and for reference. In high schools and elementary schools where the pupil has more than one teacher, the person held responsible for maintaining the record card should be clearly designated. This person may be the physical education teacher or the home room teacher.

Entries are to be recorded by the teacher in the space designated. The spaces for height and weight provide for two entries per year, the first one above the diagonal line and the second entry below the line. The Snellen test for vision (p. 47) includes both eyes, then right and left eyes separately, with (W) and without (WO) glasses. A check mark () should be made in the appropriate column under "teeth" or "hearing" to indicate decayed or irregular teeth or hearing difficulty observed by hearing test

(p. 49). The annual health summary to be completed at the end of the school year states in a few words the most significant facts concerning the pupil's health during the year and should be useful to the teacher the following year. The total days absent may have some relationship to the pupil's health during the year and should be entered in the proper column. It will be noted that 15 lines are provided for recording annual inspections of pupils in grades one through twelve. The three extra lines may be needed for extra inspections of pupils such as those transferring from one school to another during the year.

Information on immunization and tests from "Oregon Pupil Medical Record" is to be recorded showing the year of initial immunizations and booster doses. Subsequent immunizations should be entered as they are reported. Hearing loss indicated by the audiometric test is to be noted. The name of the family physician should be obtained when possible. Physicians' recommendations should be transferred from the medical record and from other report forms. These recommendations might include information regarding seating arrangements, rest periods, limitation of activities and medication in school, special transportation and teacher instruction in the home or hospital. The nurse's report is entered by the nurse during a visit to the school and refers to follow-up activities or specific observations.

The school health record card is also used for recording other aspects of health services. These include a history of communicable diseases, medication, and also serious illnesses and a record of accidents. Since this study will not delve into these phases of school health services, the mechanics of getting these other health data and information which are recorded on the school health record card will not be reviewed in the study of the

literature relating to this phase of the school health program.

E. Summary and Conclusions

The studies and related literature reviewed in this chapter considered the philosophy, organization, and administrative policies and recommended practices for school health services on the national and state levels. The literature reviewed has shown the concern of leaders in education, health, and medicine for defining and determining the role and effectiveness of teachers, nurses, and other personnel in relationship to school health services. Exploration has also been made of the concern for evaluating the various health service practices in schools, communities, and counties. These evaluation practices have been traced to the early 1920's when interest and concern were first expressed for the quality and extent of general school health program.

Of the number of studies cited in this summary which had to do with the evaluation and appraisement of the various health services, procedures and practices in the schools, it was found that most of them had been set up either on a pilot or long-term basis. The studies of the American Child Health Association (7, p. 127), the W. K. Kellogg Foundation (28, p. 175), and the Nyswander

and associates (21, p. 377) all studied the health procedures in relationship to general aspects of the health education program. Of the studies cited also the appraisal had been made mostly of the medical examination phase of the program. No information was found which related to the specifically defined responsibilities of the follow-up on the teacher screening results.

The selection of the criteria involved a choice of generally accepted procedures in health services. These procedures were selected on the basis of their citation and interpretation as well as general acceptance in the publications of the Joint Committee on Health Problems in Education of the American Medical Association and the National Education Association. It was found that the health service program as outlined in the manual Health Services for the School-Age Child in Oregon, 1958 included all of the recommended items, as well as procedures and practices that were found in the national-level literature.

A criterion has also been established on the basis of recommendations from educational, health, and medical authorities as presented in joint publications of organizations like the American Medical Association, the National Education Association, and the American School Health Association. Also, the specific

regulations or priorities which have been outlined for health services in Oregon schools have been identified and presented as a criterion or a standard for comparing the findings in this study.

No similar studies of the specific phases of health services as defined in the purposes of this dissertation have been made at the national or state levels.

CHAPTER III

PROCEDURES FOLLOWED

In reviewing the literature in the preceding chapter, it was noted that a variety of techniques had been used to make these studies. The techniques used were: observation, questionnaires, interview, score cards, job analysis, case study, health examination, health inspection, pilot studies, surveys of reports, and study of documentary data. These studies have helped the writer to decide on a plan for collecting the data and also for developing a survey questionnaire which was used in this study.

The survey questionnaire for this study was developed from the criteria recommended by Whipple (27, p. 249), former secretary of the National Society for the Study of Education. The criteria stated by Whipple are:

1. The questionnaire should be within the comprehension of those who answer it.
2. The questionnaire should demand a minimal amount of writing.
3. The questionnaire should be directed primarily to matters of ascertainable fact and less often to matters of opinion.
4. The questionnaire should elicit unequivocal replies, especially if these are later to be subjected to statistical treatment.
5. The questionnaire should deal with matters that are worth investigating and that will seem to the recipients, to be worth investigating.

6. Although demanding only brief replies, the questionnaire should stimulate supplementary communication from the recipients.
7. The questionnaire should promise the respondent a copy of the results.

Since the data for this study were to be provided by classroom teachers, the survey questionnaire had to be so worded that it would involve a minimum of their time and still include the information which was desired. It had to be constructed so that the teacher could transfer her data directly from the Oregon School Health Record Card to the survey questionnaire. The questionnaire also had to be concise to the point that the entries would include only the health referral data for the 1958-59 school year.

A preliminary draft of the questionnaire was prepared for the purpose of contacting state-level health officials, county school superintendents, county health officers, nursing supervisors and nurses, as well as local school administrators and supervisors. These people were contacted in the various counties in order to determine which ones might be interested in participating in an evaluation of this type in their particular locale. Dr. Harold M. Erickson, State Health Officer of the Oregon State Board of Health in Portland, was contacted in January, 1958, for the purpose of acquainting him with the study and also to seek his cooperation in making arrangements to contact some of the county health officers.

In a meeting with Doctor Erickson, the writer explained that he was interested in making a study in the four geographical areas of the state in order to have a representative picture of the problems involved in health service follow-up in Oregon schools.

Doctor Erickson wrote personal letters to health officers in Malheur, Jackson, Marion, and Multnomah Counties, soliciting the cooperation of the county health departments in these counties in this study. During the spring of 1958, the writer contacted the health officer, the county school superintendent, the supervisory nurse, and the general school supervisors in each of these four counties to discuss the possibility of conducting an evaluation of the follow-up in school health services in their counties.

These conferences with the county health departments and the county school office staffs resulted in a number of changes in the proposed survey questionnaire. In order to evaluate the effectiveness of the proposed questionnaire, the nursing staff in the Marion County Health Department used the instrument on a trial basis in a small number of schools in the county. These field trials proved very satisfactory, so the survey questionnaire (Appendix, p.102) was decided upon.

A. Methods of Collecting Data

Additional conferences were scheduled during the summer of 1958 at each of the four county health departments. The purpose of these conferences was to acquaint all of the public health nurses with the purposes and the mechanics or procedures involved in this study. These conferences also gave the writer an opportunity to become further acquainted with the various procedures used by the public health nurses in their working relationships with the schools. It might also be stated that these conferences with the public health nurses helped to establish a favorable climate or setting for this study in each county because the nurses had an opportunity to better understand what was involved and what some of the outcomes might be as they applied to the functions of the public health nurse.

In order not to upset the health screening and the referral routines of the teachers or the nurses in the counties, it was decided to withhold the circulation of the survey questionnaire to the various schools until at least a month or two following the opening of school in the fall of 1958.

Since Marion and Multnomah Counties were within very close proximity to the writer, these county health

offices, as well as the school offices were contacted by telephone and by personal visit in October in order to alert them to the beginning of the study. Letters were written to the health officer and the county school superintendent in Malheur County on October 30, 1958, and to Jackson County on November 12, 1958, arranging for an appointment at which time final procedures were discussed and reviewed.

The questionnaire was personally delivered by the writer to each of the large first-class districts in each county. This contact presented another opportunity for further acquainting the local school administrator with the survey. Sufficient copies of the questionnaire were left with each school administrator in first-class districts so that a copy could be distributed to each elementary school teacher, as well as to all of the health and physical education teachers in the junior and senior high schools.

In the case of the second- and third-class districts, the questionnaires were left at the county school superintendent's office, along with a letter of explanation to the administrator regarding the distribution and filling of the necessary information. Enclosed was a list of directions to each teacher describing the procedure and directions for recording information on the

survey questionnaire. (Appendix, p.102)

The procedure in Multnomah County was somewhat different since the organization for health services between the county health department and the schools is considerably different from that in other counties. In Multnomah County the information requested on the questionnaire was supplied by the public health nurses from the County Health Department office records. The County Health Department already had very complete records for the various schools for which each nurse had responsibility in her total school-community public health nursing program.

Questionnaires were distributed to 184 schools in these four counties. These included elementary schools, junior high schools, and high schools.

B. Difficulties Encountered During the Study

Follow-up letters, along with additional copies of the survey questionnaire, were mailed to those schools from which replies to the original inquiry had not been received. These letters were mailed in April, 1959. The public health nurses contacted some of these schools in their routine visits. The total number of schools returning the questionnaire was 143, or 78.5 per cent, of the total number of schools originally contacted.

Part of the difficulty in not getting returns from

all of the schools was that the public health nurses did not have a definite visitation schedule for some of the secondary schools. Their contact with some of the secondary schools, in the majority of cases, is based on an invitation schedule. When the schools feel that the services of a nurse are necessary, they will contact the county health department and request that a nurse visit their schools. In some of the counties where there is a shortage of public health nursing personnel, it may be that some of the secondary schools, especially senior high schools, are not contacted at all during some school years.

Another factor in the per cent of returns not being greater is that in the initial distribution copies of the questionnaire were sent to each school building in all of the school districts. In some instances the returns indicated that as many as three buildings were included under one administrator and constituted one elementary school. An example of this would be a school district having three buildings, one encompassing grades one through three; another building housing grades four through six; and another building housing grades seven and eight. The returns would indicate these as one administrative unit and in the initial distribution they had been counted as three schools. This, however, does

not have any bearing on the study because the number of pupils who would have been referred would still be the same whether or not the administrative unit was counted as one or as three buildings.

It was not possible to include the dental health data from Multnomah County since the dental records had not been completed in the county office at the time these data were compiled.

All of the schools participating in this study during the 1958-59 school year and returning the questionnaire are listed in the Appendix (p.112).

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was to evaluate the nature, the extent, and the effectiveness of the follow up services being rendered to referred health defects originating from school health services in selected Oregon counties. Evaluation also includes investigation of the following health service procedures: identity of school personnel involved in referrals; types of health defects being referred; types and classes of schools and school districts involved in the program; extent of school health records being maintained in selected counties; and personnel involved in those communities where good health services are being maintained.

The development and preparation of the survey-questionnaire was described in Chapter III. The questionnaire was distributed to 184 public schools in four counties. A total of 143, or 78.5 per cent, of the schools returned the questionnaire. In the 143 schools were 4,392 elementary school pupils and secondary school students who had been referred for various types of health problems from the 120 elementary schools, 9 junior high schools, and 14 high schools included in the study.

Since the returns included such a large number of cases, it was decided to code the data for punch card tabulation. The code was developed to include 17 main headings (Appendix, p.110). The categories included: name of county; school within county; student within school; grade in school; class of district; type of school; type of referral; referrer; follow up; recording of follow up; routing of information; and identity of recorder.

Numbers were designated under each of the 17 main headings to identify the variables involved in the responses of the teachers. In all categories, except "type of referral," the variables were limited to not more than ten categories.

Tables were developed from the questionnaire to facilitate the analysis and interpretation of the data. Following the tallying of the data and the preparation of the tables, a data sheet, commonly called a "source document," was referred to a machine tabulation service. The data were punched on International Business Machine cards, commonly referred to as IBM cards. A separate card was punched for each case or pupil that had been tabulated on the data sheet. The cards were then machine sorted on the basis of the teachers' responses. This resulted in a total of 4,392 individual cards.

The data for the tables used in this study were tabulated on an IBM 101 Electronic Statistical Machine. It is acknowledged that one of the major advantages of machine tabulation is that it lends itself readily to performing cross classifications of the data. In this study, the tables were developed under two main headings. The first category of tables has to do with the type of referral. This is the particular type of health problem for which a youngster may have been referred for medical, dental or other type of health follow up. The second category of tables has to do with the role of the individual making the referral. Since this procedure is a major concern in determining the effectiveness of health services, more tables appear under this second classification in this investigation.

A. Treatment of Data

In order to determine whether variations existed in health services in the counties studied, each of the 17 major items was analyzed with the use of the chi-square test of independence (8, p. 119). The chi-square value with its number of degrees of freedom is footnoted under each table. Since every chi-square value is significant, the conclusion is that health service procedures do vary

to a degree greater than chance expectancy from county to county.

B. Types of Referrals

The nature or types of health defects referred determined the working basis for this study. The basic criteria used for comparative purposes were discussed in Chapter III of this study. In this description the identity of the most common health factors to be included in the health examination were disclosed. These included deviations or disorders of vision, hearing, teeth, height, weight, behavior, speech, and other obvious physical deviations from normal health.

The total responses of the teachers are presented in Table I. A total of 15 different types of defects or health problems, as reasons for referral, were indicated in the responses. An explanation is in order to clarify the recording of no data under item 10, "Ulcers" in Table I. In the return from the schools, the principal reason for referral in this case was scored as "physical" with the identification "ulcer" in parentheses. In a preliminary appraisal of the returned survey questionnaires it was discovered that only 12 referrals indicated the reason as "ulcers." Therefore, all of these were

TABLE I. TYPES OF REFERRAL BY COUNTY

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
1	99	54	3	227	13	2		1	1							0404
2	492	305	59	766	95	27	15	7	22		3	3	1	6		1802
3	542	315	72	279	555	30	8	32	14					3	4	1856
4	209	120														329
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi-square = 1,212.56 with 42 degrees of freedom

CODE:

1 County	06 Mental or Emotional Distur-	11 Hygiene (menstruation)
01 Vision	bance	12 Fractures
02 Hearing	07 Malnutrition (underweight)	13 Pregnancy
03 Speech	08 Overweight	14 Coordination (posture)
04 Dental (teeth)	09 Tonsils	15 Immunization
05 Physical	10 Ulcers	

tallied under the heading of "physical" or physical examination, this being the principal reason given for the referral by the teacher in her response.

Dental health problems were ranked first in counties 1 and 2. Dental health referrals, item 04, represented 56.1 per cent of the total referrals in county 1, and 43 per cent of the total referrals in county 2. Physical examinations, item 05, and vision defects, item 01, were the most frequently indicated reasons for referral in county 3. These presented 29.9 and 29.2 per cent, or 59.1 per cent of the total referrals in the county. Vision defects were the principal reason for referrals in county number 4. These represented 63.5 per cent of the total referrals in the county.

Table I also presents some interesting consistencies in considering the four counties as a whole. The responses show that vision was the most frequent reason for referral, representing 28.9 per cent of the total children referred. Hearing, item 02, third, representing 18.1 per cent, and physical examinations, item 05, as the fourth most common reason, representing 15.1 per cent of the total. The other defects or reasons for referral in rank and order of significance were: speech, mental or emotional disturbance, overweight, tonsils, malnutrition (underweight), coordination (posture), ulcers, immunization, hygiene

(menstruation), fractures, and pregnancy. The literature reviewed in Chapter II stressed the importance of the health examination in determining the readiness of the pupil for attending school. The health service regulations as outlined in the manual, "Health Services for the School-age Child in Oregon," (23, p. 13), stipulates a pre-school physical examination is required. In appraising the health referrals on the basis of the pupils' grade level in school, as indicated in Table II, it is interesting to note that 692, or 15.7 per cent, of the total referrals involved first grade pupils. This seems to indicate that, either many of the first grade pupils hadn't had examinations by physicians prior to entrance to school or they may have had an examination but the defects were not detected in the examination, or no corrective or follow up had been done in the event a physical or pre-school screening examination had been provided and the defect was known to exist. Another assumption might be that many of these youngsters transferred to these schools from other counties or from other states.

There is another factor which is important in the data in Table II. This is that these same categories of defects are also the principal reasons for health referrals of pupils in grades two, three and four. In fact,

TABLE II. TYPE OF REFERRAL BY GRADE IN SCHOOL

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
01	135	202	57	225	44	11	7	0	4					2	4	692
02	136	128	36	181	22	4	3	3	8					1		521
03	140	96	8	157	15	8	1	4	5					1		435
04	145	98	8	180	23	5	4	1	6					2		472
05	149	63	4	151	17	6	1	6	7					0		404
06	139	72	10	74	14	4	0	1	2					1		317
07	185	51	7	150	147	5	1	0	3		2	1		1		553
08	120	39	2	63	274	3	2	3	1			1				509
09	93	19	0	74	52	5	2	10	0							255
10	35	12	1	8	23	4	0	4	1							89
11	51	7	0	1	19	1	0	6	0				1			86
12	14	7	1	8	12	3	2	2	0		1	1		1		52
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi square = 5431.86 with 182 degrees of freedom

CODE:

1	Grade in school	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils	15	Immunization
04	Dental (teeth)	10	Ulcers		
05	Physical	11	Hygiene (menstruation)		

the incidence of eye defects increases numerically through the seventh grade.

The incidence of dental caries very closely parallels that of vision referrals through the seventh grade in the total counties. Dental caries, according to a March, 1960 release by the Oregon State Board of Health, is the most serious health problem confronting children in the state. The data in Table II identify dental caries as the second most common health defect in the counties and schools embraced by this study.

Another factor which merits comment in Table II is the high number of referrals for physical examinations, item 05, in grades seven and eight in county 3. Of the total number of 555 students referred for medical or health follow up in this county, 422, or 76.03 per cent, were from these two grades. In further pursuing the significance of this item (physical examination) by a study of the returned questionnaires, it was noted that the majority of referrals for physical examinations originated in the four junior high schools of the largest first class district in the county.

Each of these four junior high schools has one member of its staffs designated as a health teacher. Among his duties is the responsibility for coordinating all activities within the school relating to the health of students.

This includes a study of the Oregon School Health Record Cards, for any past health problems; carrying on the health screening procedures; referring detected health problems to the attention of the nurses and parents; conferring with physicians and other teachers about the health problems of students; and recording and maintaining up-to-date health records about current problems and remedial or corrective work which may have resulted from referrals.

In studying the responses to the survey questionnaire from the schools in county 3, it was found that most of the students had been referred for physical examinations from the four junior high schools in the largest district in the county. The physical examination is required upon entrance to school and again in the seventh grade in the district. The physical examination requirement is in accordance with the regulations as outlined in the health service procedures for Oregon schools (23, p. 13). In referring the students for a physical examination, the health teachers had also indicated the necessity for booster-immunization for control of communicable diseases. This is an unique practice since immunization is generally thought to be the responsibility of the public health nurse.

School districts in Oregon are classified into three types, namely, first class, second class and third class. The classification is made on the basis of the number of children residing in the district. Those districts with 1,000 or more students are classified as first class districts. Those with less than 1,000 students but more than 200 are second class districts. Those districts with less than 200 pupils are classified as third class districts. Table III was set up to determine variations in health services in the three classes of school districts. In appraising the referrals it was found that 30.2 per cent of the totals in first class districts were for vision, 18.04 per cent for hearing, and 30.6 per cent for teeth. In second class districts the referral totals were vision 38.2 per cent, hearing 15.6 per cent, and teeth 14.1 per cent. In the third class districts the referral rate was vision 24.4 per cent, hearing 22.1 per cent, and teeth 22.1 per cent. These figures indicate that teachers in first class districts on the average refer more pupils for medical or dental follow up than do teachers in second and third class school districts in these Oregon counties.

Table IV illustrates the responses from the three types of schools, elementary schools, junior high schools, and senior high schools. The ratio of health referrals,

TABLE III. TYPE OF REFERRAL BY CLASS OF DISTRICT

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
1	1160	691	45	1174	621	48	16	33	26		2	2	1	5	4	3829
2	126	52	50	47	29	7	6	6	5		1	1		1		332
3	56	51	39	51	13	4	1	1	6					3		231
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi-square = 545.52 with 28 degrees of freedom

CODE:

1	Class of District*	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils	15	Immunization
04	Dental (teeth)	10	Ulcers		
05	Physical	11	Hygiene (menstruation)		

- *1 District 1st Class
 2 District 2nd Class
 3 District 3rd Class

TABLE IV. REFERRAL BY TYPE OF SCHOOL

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
1	969	704	133	1004	150	45	17	16	34					8	4	3089
2	285	61	0	251	456	9	4	11	2		2	2				1383
3	88	29	1	17	57	5	2	13	1		1	1	1	1		220
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi-square = 1156.16 with 28 degrees of freedom

CODE:

1	Type of School*	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils	15	Immunization
04	Dental (teeth)	10	Ulcers		
05	Physical	11	Hygiene (menstruation)		

- *1 Elementary School
 2 Junior High School
 3 High School

.05 per cent, from high schools is not in proportion to that of the junior high schools and elementary schools. The smaller proportion of referrals could result from apathy on the part of the high school teachers in assuming responsibilities for health services. The study by Cook (5, p. 144) revealed a possible source of this problem. His study showed that high school teachers did not perceive health services as a major responsibility. It is preposterous, for instance, to conceive that only 17 students in 14 high schools had dental health problems. Another illustration of the appalling lack of concern on the part of high school teachers is the low incidence of referral for overweight, only 13 students were indicated as having been referred for medical follow up under this category.

C. Identity of Follow up

An examination of Table V reveals some of the real problems in health services in Oregon schools. For instance, these data reveal that the schools do not have information as to what happened in 1,060, or in 24.1 per cent, of the referrals. In the case of vision and hearing referrals, items 01 and 02, no information is available at the school concerning whether any follow up was done

TABLE V. REFERRAL BY IDENTITY OF FOLLOW UP

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
0	313	175	8	406	94	13	6	20	9		2			3	3	1060
1	158	262	26	16	545	29	12	20	21		1	3	1	3	1	1098
2	652	20	1	9	7	2			2							693
3	0	8			4									1		13
4	13	2		710	2									1		728
5	88	47			1											136
6	3	9	87	1	1	4										105
7	3	21		1												25
8	5	189	7	2	2	3										208
9	73	57	2	122	5	6	1		4					1		271
10	34	4	3	5	2	2	4		1							55
Totals	1342	794	134	1273	662	59	23	40	37		3	3	1	9	4	4392

Chi-square = 7745.26 with 126 degrees of freedom

CODE:

1 Personnel Involved*	06 Mental or Emotional Disturbance	12 Fractures
01 Vision	07 Malnutrition (underweight)	13 Pregnancy
02 Hearing	08 Overweight	14 Coordination (posture)
03 Speech	09 Tonsils	15 Immunization
04 Dental (teeth)	10 Ulcers	
05 Physical	11 Hygiene (menstruation)	
*0 No information	3 Orthopedist	7 Otologist
1 Physician	4 Dentist	8 Audiometrist
2 Eye Doctor	5 Eye, Ear, Nose, Throat Specialist	9 Follow-up in Process
(Optometrist)	6 Speech Therapist	10 Others

in 313, or 23.5 per cent of the vision problems, or in 175, or 22.04 per cent, of the hearing problems. It is probable, because of insufficient health record data, that these same pupils will be referred again the following year for the same defects. This would be especially true with the change of teachers from grade to grade. Another contributing factor to this problem is the turnover in the public health nurses, which may mean in many instances, an entirely new teacher-nurse team working with these children and the same problems the following year.

Another illustration of the existence of this problem was the lack of information on 406, or 31.1 per cent of the dental referrals and the 13 cases, or 22.03 per cent, of the referrals for mental or emotional disturbances, item 06. The question, "What health difficulties are these pupils experiencing in school?", may justly be raised.

The identity of the follow up of vision referrals should be of interest to medical and public health personnel. This study shows that of the 1342 vision problems referred, in 652, or 48.6 per cent of the cases, the follow up was performed by an optometrist.

Table VI presents a parallel to the findings presented in the discussion of Table V. The data reveal that in

TABLE VI. RECORDING OF FOLLOW UP BY COUNTY AND TYPE OF REFERRAL

0	1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
1	Yes	92	52	3	203	13	2										365
	No	7	2		24				1	1							35
2	Yes	410	264	54	569	79	24	11	6	19		3	2		5		1446
	No	78	41	5	197	16	3	4	1	3			1	1	1		351
3	Yes	473	279	62	177	497	26	7	24	11					2	1	1559
	No	66	66	8	102	58	4	1	8	3					1	3	290
4	Yes	209	120														329
	No																

County 1 - Chi-square = 429.86 with 16 degrees of freedom

County 2 - Chi-square = 410.56 with 26 degrees of freedom

County 3 - Chi-square = 1108.28 with 33 degrees of freedom

CODE:

0	County	05	Physical	11	Hygiene (menstruation)
1	Recording of	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils		
04	Dental (teeth)	10	Ulcers		

county 1, the follow up data was known but not recorded on the Oregon School Health Record Card in 35, or 8.4 per cent, of the total cases referred. In county 2, the information was not recorded in 351, or 19.4 per cent, of the cases. In county 3, no data were recorded in 290, or 15.6 per cent of the referrals. Only in county 4 were 100 per cent records maintained. This high level of health records in county 4 merits comment. In this county, Oregon has the only example of the proper ratio of public health nurses to the total county population. The recommended health department ratio of public health nurses to total population is one nurse per 5,000 population. As a result, the schools in this county are benefiting from frequent or regularly scheduled visits by public health nurses. Also, the nurses are able to make home visits in the follow up to better acquaint the parents with the health needs of their children. This procedure was described previously in detail in this study. The nurses, because of more time for school health, are also able to maintain closer contact with the follow up of referrals in relationship to physicians, speech therapists, dentists, and others.

It may be assumed on the basis of the data presented in Tables V and VI that the school records will not

indicate what the health status of 1,736, or 39.4 per cent, of the total 4,392 pupils referred will be the following year. The 1,736 represents 1,060 pupils on whom no data were received following referral, and the 676 who were known to have had follow up but the data were not recorded on the Oregon School Health Record Card. It is possible that many of these pupils will be referred again the following year for the same defects because of these inconsistencies. The deficiencies in health services may be one of the real contributing factors to many of the learning problems of children in Oregon schools.

D. Routing of Information

One of the problems in getting follow up information to the schools and recording on the health record cards, is the lack of established procedures or policies in many of the counties which define the routing of information from the physician or dentist to the school. In order to provide a clear picture of the nature of the problems involved, the identity of the person sending the information to the school was requested in the questionnaire. The findings in Table VII substantiate the findings described in Tables V and VI. For instance, no information was received by the schools in 953, or 21.6 per cent, of the cases. This correlates very closely with the 1,060, or

TABLE VII. ROUTING OF FOLLOW UP INFORMATION TO SCHOOL

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
0	281	135	24	374	90	6	2	17	8		1	1		3	3	953
1	421	340	25	275	71	29	13	8	13		1			4		1200
2	378	122	13	361	367	16	8	10	13			1	1		1	1291
3	92	4	1	91	85	1		1	1		1	1				278
4	132	72	11	13	46	5		4	2					1		286
5	5	25	52	1	4	1										88
6	29	2	1													32
7	2	89	7	1		1										100
8	1	4		1												6
9	1	1		155										1		158
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi-square = 2482 with 126 degrees of freedom

CODE:

1	Personnel Involved*	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils	15	Immunization
04	Dental (teeth)	10	Ulcers		
05	Physical	11	Hygiene (menstruation)		
*0	No Information	4	Doctor	8	Guardian
1	Nurse	5	Special Education Teacher	9	Dentist
2	Parent	6	Optometrist (eye doctor)		
3	Pupil	7	Audiometrist		

24.1 per cent, of cases with no data on follow up as indicated in Table V, page 58.

The identity of the personnel involved in the routing of information to the school is very much as would be expected. Table VII reveals the parent, item 2, and the nurse, item 1, as being the most frequent sources of information to the school. The practice, however, of having the pupil, item 3, bring the information to school is highly questionable. In 278 of the responses, the follow up data was routed to the school by the pupil. In further studying the questionnaire responses it was noted that in many instances the teachers in the primary grades had indicated that the information was brought to school by the pupil. Such practices indicate a real need for improvement of this phase of the school health program.

E. Recording of Follow Up

Another contributing factor to the effectiveness of school health services, is the understanding of the responsibility as to who should record the follow up data on the school health record card. Health service regulations are specific on this point, (23, p. 28). The regulations state that the recording is a responsibility of the teacher. Table VIII shows that in 1,995, or 45.4

TABLE VIII. RECORDING OF FOLLOW UP BY IDENTITY OF RECORDER

1	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	Total
0	163	78	13	313	38	3	5	10	7		1	2		3	3	647
1	485	403	82	512	458	26	6	9	9		1	1		2	1	1995
2	602	259	30	374	99	24	11	14	18		1			3		1435
3	8	26	2		7											44
4	7				7	3							1			18
5	0				1											1
6	57	28	7	73	52	3	1	7	3					1		232
7	20															20
8					1											1
Totals	1342	794	134	1272	663	59	23	40	37		3	3	1	9	4	4392

Chi-square = 923.95 with 98 degrees of freedom

CODE:

1	Recorder*	06	Mental or Emotional Disturbance	12	Fractures
01	Vision	07	Malnutrition (underweight)	13	Pregnancy
02	Hearing	08	Overweight	14	Coordination (posture)
03	Speech	09	Tonsils	15	Immunization
04	Dental (teeth)	10	Ulcers		
05	Physical	11	Hygiene (menstruation)		
*0	No information	4	Dean of Girls	7	Follow-up in Process, not completed
1	Teacher	5	Dean of Boys	8	Principal
2	Nurse	6	Recorded but Recorder not Identified		
3	Special Education Teacher				

per cent of the follow up cases, the recording was done by the teacher. In 1,435, or 32.6 per cent of the cases, the recording was done by the nurse. It is found that in 647, or 14.7 per cent of the cases, no entry or information was available regarding the follow up. These figures show a need for emphasizing the importance of health records in pre-service and in-service teacher and nurse education programs.

F. Identity of Personnel Involved in Referrals

The responses to the identity and role of the referrer as revealed in Tables IX and X indicate the extent of the participation by the various people involved in the referrals. The teacher and the nurse, as expected, perform the key functions. The teacher-nurse relationship, as illustrated by this table, is significant throughout the twelve grades. A total of 3,727, or 85.04 per cent, of all the referrals were through these channels. Others in order of referrals were as follows: audiometrist, dentist, physician, principal, dean of girls, special education teachers and parents.

The response in county 4, as is indicated in Tables XI and XII, shows that all of the referrals have been made by either a teacher or an audiometrist. The high rate of referrals in county 1 by the dentist signifies

TABLE IX
IDENTITY OF REFERRER BY COUNTY

County	0	1	2	3	4	5	6	7	8	9	Total
1		180	22	21			6	1	20	150	404
2		474	1186	28	29	39	26	7	4	5	1802
3		894	763	34	16	80	26	17	7		1857
4		208				121					329
Totals		1756	1971	83	45	240	58	25	31	155	4392

Chi-square = 2892.44 with 27 degrees of freedom

CODE:

0	No Information	5	Audiometrist
1	Teacher	6	Principal
2	Nurse	7	Parent
3	Physician (doctor)	8	Special Education Teacher
4	Dean of Girls	9	Dentist

TABLE X
IDENTITY OF REFERRER BY GRADE IN SCHOOL

00	0	1	2	3	4	5	6	7	8	9	Total
1	8	234	272	22	3	100	4	4	10	42	699
2	1	221	196	7		38	5	8	3	42	521
3	9	194	148	16		23	6	1	3	35	435
4	8	225	169	3	9	27	4	4	3	20	472
5		172	178	1		18	9	2	10	14	404
6		155	127	1		27	5		2		317
7		228	292	19		4	8	2			353
8		135	354	8		3	5	3		1	509
9		131	112	4	3		5				255
10	1	24	56	1	5		2				89
11		24	46	1	13		1			1	86
12	1	13	21		12		4	1			52
Totals	28	1756	1971	83	45	240	58	25	31	155	4392

Chi-square = 2214.46 with 117 degrees of freedom

CODE:

00	Grade in School	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		

TABLE XI. IDENTITY OF REFERRER BY COUNTY AND CLASS OF DISTRICT

County	00	0	1	2	3	4	5	6	7	8	9	Total	Grand Total
1	1		170	17	21			6	1	20	150	385	
	2		1									1	
	3	4	9	5								18	
Total		4	180	22	21			6	1	20	150	404	404
2	1	4	325	1062	17	26	27	13	6	4	4	1488	
	2		127	93	7	3	9	8	1		1	249	
	3		22	31	4		3	5				65	
Total		4	474	1186	28	29	39	26	7	4	5	1802	1802
3	1	1	747	717	34	15	79	17	13	4		1627	
	2	1	55	22		1			2	1		82	
	3	18	92	24			1	9	2	2		148	
Total		20	894	763	34	16	80	26	17	7		1857	1857
4	1		208				121					329	
	2												
	3												
Total			208				121					329	329
County #1 - Chi-square = 113.66 with 14 degrees of freedom													4392
County #2 - Chi-square = 159.46 with 18 degrees of freedom													
County #3 - Chi-square = 278.03 with 16 degrees of freedom													

CODE:

00 Class of District
 0 No information
 1 Teacher
 2 Nurse

3 Physician (doctor)
 4 Dean of Girls
 5 Audiometrist
 6 Principal

7 Parent
 8 Special Education
 Teacher
 9 Dentist

TABLE XII. IDENTITY OF REFERRER BY COUNTY AND TYPE OF SCHOOL

County	00	0	1	2	3	4	5	6	7	8	9	Total Referrers	Grand Total
1	1	3	110	21	21			6	1	20	150	332	
	2		49	1								50	
	3	1	21									22	
Total		4	180	22	21			6	1	20	150	404	404
2	1	2	443	908	27	12	39	19	7	4	4	1465	
	2		8	208				1				217	
	3	2	23	70	1	17		6			1	120	
Total		4	474	1186	28	29	39	26	7	4	5	1802	1802
3	1	19	558	258	6		80	21	14	7		963	
	2		305	479	27			3	2			816	
	3	1	31	26	1	16		2	1			78	
Total		20	894	763	34	16	80	26	17	7		1857	1857
4	1		208				121					329	
	2												
	3												
Total			208				121					329	329
												4392	4392

County #1 - Chi-square = 103.60 with 14 degrees of freedom

County #2 - Chi-square = 256.39 with 18 degrees of freedom

County #3 - Chi-square = 648.21 with 14 degrees of freedom

CODE:

00	Type of School*	3	Physician (doctor)	7	Parent
0	No Information	4	Dean of Girls	8	Special Education Teacher
1	Teacher	5	Audiometrist	9	Dentist
2	Nurse	6	Principal		
*1	Elementary School	2	Junior High School	3	High School

the initiation of a dental health project in one of the three first class districts. This information was provided by the county health department staff on a personal visit to their office. In order to better understand the nature of the problems involved in the health follow up as defined in the purposes of this study, it was necessary to ascertain the inter-relationship between the identity of the referrer, the nature of the follow up, personnel involved in the follow up services. These variables were processed through machine tabulation. Tables XIII, XIV, XV, and XVI depict the identity as well as the extent of each individual's participation in the follow up in the four counties included in this study. These tables are a supplement to Table V, page 58, which described the follow up in relationship to the type of defect. On the basis of the data as revealed on these tables, the identity of the referrer seems to have little or no bearing on the extent of the follow up.

The responses to item 3, physician, revealed that even upon referrals by physicians, there was no follow up in 12.8 per cent of all the cases referred by the medical doctors. In further appraising the responses on the questionnaires it was found that in many instances the teacher, or the nurse, had indicated the negative or indifferent attitude of the parent or legal guardian as

TABLE XIII
IDENTITY OF FOLLOW UP IN COUNTY #1

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	27	10	2					4	9	56
1		25	5	6			2		6		44
2		61	1	1				1	2		66
3		0									0
4		1	5	9			4			112	131
5		0									0
6		2									2
7		3							1		4
8		14	1						7		22
9		47		3						29	79
10											
Totals	4	180	22	21			6	1	20	150	404

Chi-square = 368.64 with 49 degrees of freedom

CODE:

00	Follow-up Personnel*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (Doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	6	Speech Therapist
1	Physician (doctor)	7	Otologist
2	Eye Doctor (optometrist)	8	Audiometrist
3	Orthopedist	9	Follow-up in Process
4	Dentist	10	Others
5	Eye, Ear, Nose, Throat Specialist		

TABLE XIV
IDENTITY OF FOLLOW UP IN COUNTY #2

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	98	386	5	10	18	3	1	3	1	529
1		113	152	7	4	5	7	4	1	1	294
2		97	153	5	6	3	5				269
3			9	1							10
4		36	381	6	6		6			3	438
5		1	3								4
6		29	10		2		3				44
7		6	6					1			13
8		46	9	2		2					59
9		6	69	2	1	11	1				90
10		42	8				1	1			52
Totals	4	474	1186	28	29	39	26	7	4	5	1802

Chi-square = 366.19 with 81 degrees of freedom

CODE:

00	Follow-up Personnel*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	6	Speech Therapist
1	Physician (doctor)	7	Otologist
2	Eye Doctor (Optometrist)	8	Audiometrist
3	Orthopedist	9	Follow-up in Process
4	Dentist	10	Others
5	Eye, Ear, Nose, Throat Specialist		

TABLE XV
IDENTITY OF FOLLOW UP IN COUNTY #3

00	0	1	2	3	4	5	6	7	8	9	Total
0	19	164	206	3	6	13	2	11	1		414
1	1	240	380	9	8	44	10	4	5		708
2		194	82	13	1	4	3				301
3		1		1	1						3
4		84	72				3				159
5		14	4	1		4		1			24
6		53	2				3		1		59
7		2	1	1		4					8
8		99	8	5		10	4				127
9		42	7	1			1				51
10		1	1			1					3
Totals	20	894	763	34	16	80	26	17	7		1857

Chi-square = 498.04 with 80 degrees of freedom

CODE:

00	Follow-up Personnel*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	6	Speech Therapist
1	Physician (doctor)	7	Otologist
2	Eye Doctor (Optometrist)	8	Audiometrist
3	Orthopedist	9	Follow-up in Process
4	Dentist	10	Others
5	Eye, Ear, Nose, Throat Specialist		

TABLE XVI
IDENTITY OF FOLLOW UP IN COUNTY #4

00	0	1	2	3	4	5	6	7	8	9	Total
0		34				27					61
1		16				36					52
2		57									57
3											
4											
5		79				29					108
6											
7											
8											
9		22				29					51
10											
Totals		208				121					329

Chi-square = 71.61 with 4 degrees of freedom

CODE:

00	Follow-up Personnel*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	6	Speech Therapist
1	Physician (doctor)	7	Otologist
2	Eye Doctor (Optometrist)	8	Audiometrist
3	Orthopedist	9	Follow-up in Process
4	Dentist	10	Others
5	Eye, Ear, Nose, Throat Specialist		

the reason for no follow up.

Table XVI, page 75, indicates the situation in county 4. In each instance a home visit had been made by the public health nurse. Yet in 61, or 18.5 per cent of the cases, as shown in Table XVI in county 4, no follow up had been achieved, other than a home visit by the nurse. The significant aspect of this procedure in county 4 is that the health records revealed the situation, so the teachers who may work with these children in the subsequent years would be familiar with the health problems should any of these children be in their classes. This is extremely significant and these findings may be interpreted in a number of ways. In the first place, the parents may not understand the extent or seriousness of the impairment, or they don't care. The seeking of medical care may not be in accord with their fundamental beliefs. Or, they may be indigent and too proud to seek assistance of any kind. In the final analysis, the figures show a real need for further parent education so that the parents can better understand the importance of optimum child health as the pathway to success and happiness in school and latter-day adult life.

Table XVII is a companion tabulation to Table VI, page 60. It reveals the keeping of the health record in relationship to the identity of the referrer. Table VI

illustrated the status of health records on the basis of the type of defect while Table XVII depicts the role of the referrer in relationship to the entry in the records of information regarding the follow up. Of the total number of 4,392 referrals, no health record was kept by the school in 676, or 15.7 per cent of the cases. The relationship or identity of the referrer seemed to have no bearing on the recording of the health data.

The important point here is that many of these 676 pupils may have had some type of corrective or preventive work done through medical or dental channels, but since no entry was made in the health record, a study of the health record card would not reveal the nature or extent of the follow up which may have been done.

The data indicated in Tables XVIII, XIX, XX, and XXI illustrate the role of the different personnel in routing follow up health data to the schools. These tables further supplement Table VII, page 63, by interpreting the findings and practices on the basis of the individual counties. The parent, item 2, has a key role in county 1. In 140 instances, or 31.8 per cent of the total, follow up data were routed to the school by the parent. Table XVIII also reveals another source of the health service follow up problem in county 1, in that the nurse had a part in reporting follow up on only 37, or

TABLE XVII. RECORDING OF FOLLOW UP BY COUNTY AND REFERRER

000	00	0	1	2	3	4	5	6	7	8	9	Total	Grand Total
	0	4										4	
1	yes		171	22	20			6	1	18	127	365	
	no		9		1					2	23	35	
	Total	4	180	22	21			6	1	20	150	404	404
	0	4	3	1								5	
2	yes	2	417	913	27	18	34	20	7	4	4	1446	
	no	1	54	272	1	11	5	6			1	351	
	Total	4	474	1186	28	29	39	26	7	4	5	1802	1802
	0	3	1	2								6	
3	yes	1	776	622	33	13	73	19	16	6		1559	
	no	16	117	139	1	3	7	7	1	1		292	
	Total	20	894	763	34	16	80	26	17	7		1857	1857
	0												
4	yes		208				121					329	
	no												
	Total		208				121					329	329
County #1 - Chi-square = 418.70 with 14 degrees of freedom													4392
County #2 - Chi-square = 135.87 with 18 degrees of freedom													
County #3 - Chi-square = 225.36 with 24 degrees of freedom													

CODE:

000	County	2	Nurse	6	Principal
00	Recorded or not Recorded*	3	Physician (doctor)	7	Parent
0	No Information	4	Dean of Girls	8	Special Education Teacher
1	Teacher	5	Audiometrist	9	Dentist
*0	No Information				
	yes				
	no				

TABLE XVIII
ROUTING OF FOLLOW UP INFORMATION BY IDENTITY OF
REFERRER IN COUNTY #1

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	29	7	5						23	68
1		18	4	4					2	9	37
2		63	10	12			6		2	47	140
3		42						1	1	36	80
4		13							3		16
5		4	1						10		15
6		2									2
7		7							2		9
8		1								1	2
9		1								34	35
Totals	4	180	22	21			6	1	20	120	404

Chi-square = 278.65 with 63 degrees of freedom

CODE:

00	Personnel Involved*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		

* 0	No Information	5	Special Education Teacher
1	Nurse	6	Optometrist (eye doctor)
2	Parent	7	Audiometrist
3	Pupil	8	Guardian
4	Doctor	9	Dentist

TABLE XIX

ROUTING OF FOLLOW UP INFORMATION BY IDENTITY OF
REFERRER IN COUNTY #2

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	73	307	3	11	11	6		4	1	420
1		184	381	10	3	21	11	1		1	612
2		98	293	3	3	2	5	4		2	410
3		16	4	4			1				25
4		65	78	5	7	1	1	2			159
5		18	2		4		2				26
6		2	16								18
7		15	7			4					26
8											
9		3	98	3	1					1	106
Totals	4	474	1186	28	29	39	26	7	4	5	1802

Chi-square = 329.33 with 72 degrees of freedom

CODE:

00	Personnel Involved*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		

* 0	No Information	5	Special Education Teacher
1	Nurse	6	Optometrist (eye doctor)
2	Parent	7	Audiometrist
3	Pupil	8	Guardian
4	Doctor	9	Dentist

TABLE XX
ROUTING OF FOLLOW UP INFORMATION BY IDENTITY OF
REFERRER IN COUNTY #3

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	246	184	3	8	14	6				465
1		113	67	3	7	20	6	3	3		222
2	16	247	437	8	1	14	4	13	1		741
3		115	40	14			4				173
4		75	20	1		12	1	1	1		111
5		37	5				4		1		47
6		8	2			2					12
7		40	2	5		18					65
8		2					1		1		4
9		11	6								17
Totals	20	894	763	34	16	80	26	17	7		1857

Chi-square = 563.35 with 72 degrees of freedom

CODE:

00	Personnel Involved*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		

* 0	No Information	5	Special Education Teacher
1	Nurse	6	Optometrist (eye doctor)
2	Parent	7	Audiometrist
3	Pupil	8	Guardian
4	Doctor	9	Dentist

TABLE XXI
ROUTING OF FOLLOW UP INFORMATION BY IDENTITY OF
REFERRER IN COUNTY #4

00	0	1	2	3	4	5	6	7	8	9	Total
0											
1		208				121					329
2											
3											
4											
5											
6											
7											
8											
9											
Totals		208				121					329

CODE:

00	Personnel Involved*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	5	Special Education Teacher
1	Nurse	6	Optometrist (eye doctor)
2	Parent	7	Audiometrist
3	Pupil	8	Guardian
4	Doctor	9	Dentist

9.1 per cent of the total of 404 pupils referred.

County 1 has only one public health nurse. It was reported in a conference with the county health officer and the public health nurse that her only contact with schools was on call. This was due, in part, to her heavy load of other public health duties in the county. The real source of this problem is probably the fact that no school health conferences had been scheduled, whereby individual schools could discuss their child-health problems with the nurse.

In county 2, Table XIX, a total of 612, or 30 per cent, of the follow up information was routed to the school by the nurse and 22.7 per cent by the parents. In nine per cent of the instances, the follow up information is routed to the school by physicians. Parents take a very active role in county 3, Table XX, in channeling follow up health data to the school. Table XX reveals that in 40 per cent of the cases parents had a part in getting the data to the school. The really serious problem in counties 2 and 3, Tables XIX and XX, is that in approximately 28 per cent of the cases no information is available as to what happened to the referral. Here is one of the significant weaknesses in the health services program as revealed in this study.

In all of the cases in county 4, the follow up was

referred to the school by the nurse. Also, the school health record card included the status of each child's health referral.

The inter-relationship of the referrer to the individual making the final entry in the school health record card is shown in Tables XXII, XXIII, XXIV, and XXV. The data are compared with the findings on Table IX, page 67, which revealed the identity of the referrer by each county. The teacher, in Table XXII, referred 44.5 per cent of the defects in county 1 and was also responsible for recording the information on the Oregon School Health Record Card in 77.8 per cent of the cases. The other entries were recorded by the special education teacher 11 per cent of the time, or were not recorded 11.4 per cent of the time.

The data for county 2, Table XXIII, show the nurse making 65.8 per cent of the referrals and recording 48.4 per cent of the follow ups. The teachers referred 26.3 per cent and recorded 25.4 per cent of the follow ups. The real problem, however, is that out of the total of 1,802 pupils referred, no information was recorded on the health record card in 452 instances, or in 25.08 per cent of the cases in this county.

County 3, Table XXIV, shows a similar pattern in the total follow up. Teachers referred 47.6 per cent of the

TABLE XXII
RECORDING OF FOLLOW UP IN COUNTY #1

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	10		6					2	24	46
1		148	20	11			5	1	3	126	314
2											
3		22	2	4			1		15		44
4											
5											
6											
7											
8											
9											
Totals	4	180	22	21			6	1	20	150	404

Chi-square = 155.5 with 14 degrees of freedom

CODE:

00	Identity of Recorder*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	5	Dean of Boys
1	Teacher	6	Recorded but Recorder not Identified
2	Nurse	7	Follow-up in Process (not completed)
3	Special Education Teacher	8	Principal
4	Dean of Girls		

TABLE XXIII
RECORDING OF FOLLOW UP IN COUNTY #2

00	0	1	2	3	4	5	6	7	8	9	Total
0	4	75	337	2	14	8	8		3	1	452
1		179	233	8	1	23	8	4		3	459
2		213	616	18	3	8	10	3	1	1	873
3											
4		7			11						18
5											
6											
7											
8											
9											
Totals	4	474	1186	28	29	39	26	7	4	5	1802

Chi-square = 555.28 with 27 degrees of freedom

CODE:

00	Identity of Recorder*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
*0	No Information	5	Dean of Boys
1	Teacher	6	Recorded, but Recorder not Identified
2	Nurse	7	Follow-up in Process (not completed)
3	Special Education Teacher	8	Principal
4	Dean of Girls		

TABLE XXIV
RECORDING OF FOLLOW UP IN COUNTY #3

00	0	1	2	3	4	5	6	7	8	9	Total
0	3	76	59	1	5	5					149
1	1	560	528	27	69	17	14	6			1222
2		149	63	5	8	2	3	3			233
3											
4											
5											
6	16	89	112	1	3	4	6		1		232
7		20									20
8			1								1
9											
Totals	20	894	763	34	16	80	26	17	7		1857

Chi-square = 215.36 with 40 degrees of freedom

CODE:

00	Identity of Recorder*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	5	Dean of Boys
1	Teacher	6	Recorded, but Recorder not Identified
2	Nurse	7	Follow-up in Process (not completed)
3	Special Education Teacher	8	Principal
4	Dean of Girls		

TABLE XXV
RECORDING OF FOLLOW UP IN COUNTY #4

00	0	1	2	3	4	5	6	7	8	9	Total
0											
1											
2		208				121					329
3											
4											
5											
6											
7											
8											
9											
Totals		208				121					329

CODE:

00	Identity of Recorder*	5	Audiometrist
0	No Information	6	Principal
1	Teacher	7	Parent
2	Nurse	8	Special Education Teacher
3	Physician (doctor)	9	Dentist
4	Dean of Girls		
* 0	No Information	5	Dean of Boys
1	Teacher	6	Recorded, but Recorder not Identified
2	Nurse	7	Follow-up in Process (not completed)
3	Special Education Teacher	8	Principal
4	Dean of Girls		

defects and recorded 65.8 per cent of the follow ups. Nurses referred 41.09 per cent and recorded 12 per cent of the follow ups in this county. The principal is revealed as having a part in recording the follow up in 12 per cent of the instances. This would be true in the small third class districts, yet in this county 15.6 per cent of their information on the follow up was not recorded on the health record cards.

Responses from county 4 indicate that in 100 per cent of the pupils referred, the follow up data were recorded on the health card by the public health nurse. The health referral procedure has been previously explained on page 66 of this thesis, in describing Table IX, that the referrals have been made by two people, the teacher on vision defects, and the audiometrist for hearing problems in this county.

G. Summary

The data compiled from the returns showed that a total of 4,392 different children had been referred for medical or dental follow up from the 143 schools included in the study. Fifteen different categories of defects were identified in the referrals.

The data were machine tabulated on an I.B.M. 101

Electronic Statistical Machine. Chi-square test of independence was used for each table.

Every chi-square value was found to be significant, indicating that health service procedures vary significantly from county to county. It was apparent from the findings that many Oregon schools are encountering serious problems in the health referral and follow up program. In a large proportion of the referrals the school does not know whether follow up resulted. In many instances, the follow up information has been sent to the school, but no entries have been made on the school health cards to identify the status of the health problem involved. The identity of the referrer or the individuals involved in the follow up seems to have no bearing on the degree of efficiency in the program.

The ratio of public health nurses to the per capita population in the county seems to have a definite relationship to the effectiveness of the school health program, at least in the area of health services.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The findings in this study unveiled the variety of practices and procedures being used in the health service programs in Oregon schools and counties. Health service procedures were evaluated on the basis of approved or established school health standards as developed by recognized authorities at the state and national levels.

The health service procedures were appraised on the following basis: type of schools; class of school districts; grade level of pupils; types of defects being referred; personnel involved in the referral; personnel taking part in the follow up; recording of the follow up; individuals routing the follow up information to the school; and identity of the personnel responsible for recording the follow up health data on the Oregon School Health Record Card.

A. Conclusions

The following conclusions resulted from this study:

First: schools have up-to-date records of the health defects which have been uncovered by physical examinations given by physicians and by the screening procedures

of teachers, nurses, dentists, audiometrists, principals, special education teachers, and parents.

Second: teachers in elementary and junior high schools are more concerned than are teachers in the high schools with the health status of their students.

Third: the types of health defects in order of frequency of referral were: vision, 30.7 per cent; teeth, 28.9 per cent; hearing, 18.1 per cent; physical examination, 15.1 per cent; speech, 3.05 per cent; mental or emotional disturbance, 1.1 per cent; overweight, tonsils, malnutrition (underweight), coordination (posture), ulcers, immunizations, hygiene (menstruation), fractures, and pregnancy constituting the others. The nature of referrals is consistent with the recommended health service practices as defined in the criteria, page 16 of this study.

Fourth: the high incidence of referrals involving first grade pupils seemed to be indicative of many first graders not having had pre-school physical examination prior to entrance to school. Of the total referrals, 692, or 15.7 per cent, were first grade pupils.

Fifth: the high referral rate, 521, or 11.1 per cent, was from the second grade, may be indicative of the ineffectiveness and failure of the follow up program when

these same pupils were in the first grade. This, in the writer's viewpoint is due to improper channeling of information from physicians, dentists, and parents, and others back to the school regarding any follow up service which may have been provided for children with referred health defects. This lack of communication oftentimes results in having duplication of referrals for the same defects year after year. The findings in this study seem to bear this out. The hypothesis presented in this study, page 6, identified this possibility in the health service program in Oregon schools.

Sixth: those junior high schools which were known to have special teachers with assigned responsibilities for health screening, health counseling, and health guidance were among the highest in the frequency of referrals. This is an indication of the possible value which can be derived from having qualified personnel assigned to coordinate the school health program.

Seventh: teachers in first class districts, on the average, referred more pupils for medical or dental follow up than did teachers in the second and third class districts in the counties evaluated.

Eighth: in rank and order of frequency, the personnel who participated in the follow up of health defects

were: physician; dentist; eye doctor (optometrist); audiometrist; eye, ear, nose, throat specialist; speech therapist; otologist; and orthopedist. The nature of the follow up correlates very closely with the types of defects referred in that the type of defect determined the nature of the follow up service. An example is the high frequency of follow up for vision, item 01, 48.6 per cent, were performed by the optometrists.

Ninth: the most important problem revealed by the present study seems to be the apparent inefficiencies in the follow up phase of the problem. The schools encompassed by this evaluation did not have data, or information of any kind, on what happened in 1,060, or 24.1 per cent of the referrals. These findings further substantiated the hypothesis expressed in this thesis, page 6, that, teachers do not in many instances, know if any medical, dental, or health follow up has been done.

Tenth: on the basis of the findings in this study, there are strong indications that counties in Oregon, whose health department staffs of public health nurses do not approximate the nationally recommended ratio of one public health nurse per 5,000 population, are understaffed in terms of services rendered. The one county where the ratio of public health nurses reached the recommended nurse-population ratio was found to be the only instance

in which the health records revealed the accurate status of all referral and follow up cases.

Eleventh: schools were also found to be lax in the recording of follow up data that were known. The findings substantiated these flaws by revealing that in 676, or 15.7 per cent, of the cases no record was kept of the follow up in the school. This is an indication of the need for further pre-service and in-service education of teachers and public health nurses to improve this phase of the school health program.

Twelfth: the identity of the referrer, the personnel involved in the follow up, or the nature of the defect referred seems to have no bearing on the follow up of a defect or the recording of the data.

Thirteenth: parents were found to have an important role in relaying health information to schools in those counties where public health nursing services were at a minimum.

Fourteenth: in counties and schools where all health data, referrals and follow up were kept up-to-date the data were brought to the school by the nurses and recorded by the nurses. The practice of having such a high rate of returns recorded is indicative of the effective teamwork of teachers and nurses resulting from well-planned

programs.

Fifteenth: health services record-keeping in Oregon may be judged to be only in the order of 60.6 per cent effective since the schools do not have follow up data or any record of the diagnostic or remedial information in 1,736, or 39.4 per cent, of all of the pupils referred as revealed in this study.

Sixteenth: since the chi-square value is significant for each health procedure appraised in this investigation the conclusion is that health practices vary considerably from county to county.

Seventeenth: there is need for further coordination of the services involved with the follow up of health defects in order to correct the present weaknesses as revealed in this investigation.

B. Recommendations for Further Study

The research studies in the follow up phases of school health programs are extremely limited in comparison to those made of the perceived scope and content of the total health education curriculum. Most of the previous studies have been concerned with the total school health program. Further research is needed in health screening, health referral, health follow up, and maintenance and use of health records. Recommendations for further study in

these areas as shown from the experiences and findings resulting from the present study are as follows:

1. A study be made on the degree of emphasis being given to the follow up phase of health services in the pre-service education of teachers in Oregon colleges and universities.
2. An investigation be made of the nature and extent of the administrative policies and school board regulations outlining the organization and administration of health service programs in Oregon schools.
3. A pilot study be developed to investigate and follow up the health and the scholastic status of pupils who have been referred for diagnostic and remedial services over a period of years in school, but where no corrective or other type of services have been rendered. (This suggests a longitudinal study of a group of first grade pupils who may be referred for follow up of suspected health defects in the first year of school but with no known follow up taking place, then checking these same children in subsequent grades in school to evaluate their progress in relationship to achievement in school and the extent of the health impairment.)

4. A study be made of the extent of the use of the health data as recorded on the Oregon School Health Record Card in relation to the total guidance and counseling program in the senior high schools.
5. An evaluation be made of the health program in the non-public schools.
6. An investigation be initiated through the Joint Staff Committee of the Oregon State Board of Health, the State Department of Education, and the State System of Higher Education on Health, Education, and Fitness to study the causes of the increasing incidence of eye defects from grade 1 through grade 7.

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A P P E N D I X

TO THE TEACHER

Directions for Recording Information
on the Attached "Health Service Follow-Up" Survey
1958-1959 School Year

The attached form "Health Service Follow-Up" is distributed with one copy for each teacher in your school. Please check the answer in the space provided for each pupil who may have been referred, in your room, to parents for medical or dental attention. We would like to have you record every pupil who was referred for a health problem this school year.

Note: Please do not include communicable disease and skin infection referrals.

The information should be recorded in the numbered spaces on the attached form as follows:

1. Record the name of the pupil. (The analysis of this survey will not disclose any individuals by name.)
2. Type of referral. Indicate here the nature of the referral as: "Hearing," "Vision," "Weight problem," etc.
3. Indicate here who referred the pupil. Was it by you as the teacher, the nurse, a doctor, the principal?
4. Follow-up on referral. If there was an examination by a doctor or dentist following the referral to parent, indicate in column #4 who performed the examination.
5. Column #5 is either "Yes" or "No". Please indicate.
6. Who sent the information to the school? This is very important. Did it come via the nurse? the parent via the pupil? or who? Please indicate who sent the information to the school.
7. Column #7 is also very important. Please indicate who actually recorded this information on the Oregon School Health Record Card. Was it you as the teacher? the nurse? a school secretary? or who?
8. Give the completed form to your principal. He will mail this information to the State Department of Education.

HEALTH SERVICE FOLLOW-UP 1958-1959

Name of School	County	Grade
Name of Student 1.	Type of Referral (Vision, Hearing, etc.) 2.	Referred By (Teacher, Nurse, Doctor, Principal) 3.
1.		
2.		
3.		
4.		
5.		
6.		

HEALTH SERVICE FOLLOW-UP 1958-1959 (Cont'd)

Follow-Up on Referral (Examined by Physician, Dentist, Eye Doctor, etc.) 4.	Was Information Recorded on School Health Record Card? (Yes or No)5.	Who Sent Information to School? (Parent, Nurse, Doctor; Please Indicate) 6.	Who Recorded Follow-Up Information on School Health Record Card? Please Indicate Nurse, Secretary, Teacher 7.
1.			
2.			
3.			
4.			
5.			
6.			

STATE OF OREGON
Department of Education
Division of General Education
106 State Library Building
Salem, Oregon

March 9, 1959

Mr. _____, Supt.
_____ Public Schools
_____, Oregon

Dear Mr. _____:

Your assistance is requested in a study of the follow up on health referrals in Oregon schools. A number of school districts have well-functioning programs for channeling information to schools following the examination of pupils by physicians and dentists on referral for a health problem from school. In order to further improve the follow-up health services in counties and school districts where problems still prevail in getting the necessary health data to schools, your cooperation in providing the necessary information on the attached form, "Health Services Follow Up," will be appreciated.

One copy should be given to each teacher in your school. The questionnaire is brief and should be filled according to the instructions on the cover page. The public health nurse for your school is interested in this study and can be called on to answer questions which might be raised by your teachers in completing the necessary data.

Your attention is referred to the "note" on the instructions page, and that is "....do not include communicable disease and skin infection referrals."

We are enclosing an addressed folder for returning the questionnaires to our office.

Sincerely yours,

REX PUTNAM
Supt. Public Instruction

By - GEORGE J. SERNIO
Director of Health
and Physical Education

GJS:ng
Encl.

STATE OF OREGON
Department of Education
Division of General Education
106 State Library Building
Salem, Oregon

March 9, 1959

Mr. _____, Supt.
_____ Public Schools
_____, Oregon

Dear Mr. _____:

As you know from past years, this office has conducted various studies and surveys in order to determine trends and to keep abreast of problems in school health programs. In order to further assist those counties and school districts who are still encountering problems in getting the necessary health data to schools following an examination by a physician or dentist, we are contacting schools in four selected Oregon counties to gather information for this study. These counties have a number of school districts with well-functioning programs for channeling health data from doctors to schools.

We are requesting your assistance in this study. We would like to have you distribute the attached questionnaire to your health and physical education teachers, your deans of boys and girls, or whoever is responsible for health screening and referring student health problems to parents, and keeping the health record cards in your school.

The questionnaire is brief and should be filled according to the instructions on the cover page. The public health nurse for your school is interested in this study and can be called on to answer questions which might be raised by your staff in completing the necessary data.

Your attention is referred to the "note" on the instructions page, and that is "....do not include communicable disease and skin infection referrals."

We are enclosing an addressed folder for returning the questionnaires to our office.

Sincerely yours,

REX PUTNAM
Supt. Public Instruction

By - GEORGE J. SERNIO
Director of Health
and Physical Education

GJS:ng
Encl.

STATE OF OREGON
Department of Education
Division of General Education
106 State Library Building
Salem, Oregon

March 17, 1959

Mrs. Edna Blaylock, R. N.
Public Health Nurse
P. O. Box 427
Vale, Oregon

Dear Mrs. Blaylock:

Please find enclosed copies of the letters that have been sent to elementary and secondary school administrators in Malheur County. The letter marked with a "1" is the one that has been sent to elementary school administrators in the Malheur County schools.

The letter marked with a "2" is the one that was sent to the high school administrators in all of the Malheur County schools.

Copies of the attached questionnaire were mailed in sufficient numbers so that one could be distributed to each elementary classroom teacher. As is indicated in the high school letter, this questionnaire is to be distributed only to the health and physical education teachers, the deans, the counselors, or whoever is responsible for the health screening referral and the health records in the junior and senior high schools.

I also enclosed self-addressed, stamped return envelopes in all of these letters. You will note that I referred to your services in assisting in filling out this questionnaire. You will agree, I am sure, that this questionnaire is very brief and its only purpose is to uncover some of the trends and problems connected

with improving the health of the school-age child in Oregon. Should you have any questions regarding this questionnaire, please do not hesitate to refer them to me.

You will note that I am mailing a copy of these materials to Mr. William Leggitt, County School Superintendent, for his information.

Sincerely yours,

REX PUTNAM
Supt. Public Instruction

By - GEORGE J. SERNIO
Director of Health
and Physical Education

GJS:ng
cc: Mr. W. Leggitt

CODE FOR TABULATION OF DATA

Column

1	County	1. Malheur 2. Jackson 3. Marion 4. Multnomah
2-3	School within County	001 002 003 068
4-6	Student within School	001 002 003 351
7-8	Grade in School	01 02 12
9	Class of District	1. 1st Class 2. 2nd Class 3. 3rd Class
10	Type of School	1. Elementary 2. Junior High School 3. High School

CODE FOR TABULATION OF DATA (Cont'd)

11-12	Type of Referral	01	Vision	09	Tonsils
		02	Hearing	10	Ulcers
		03	Speech	11	Hygiene (menstruation)
		04	Dental (teeth)	12	Fractures
		05	Physical	13	Pregnancy
		06	Mental or Emotional Disturbance	14	Coordination
		07	Malnutrition (underweight)	15	Immunization
		08	Overweight		
13	Referred by	0	No information	6	Principal
		1	Teacher	7	Parent
		2	Nurse	8	Special Education Teacher
		3	Physician (Dr.)	9	Dentist
		4	Dean of girls		
		5	Audiometrist		
14	Follow-Up	0	No information	6	Speech Therapist
		1	Physician (Dr.)	7	Otologist
		2	Eye Doctor (optometrist)	8	Audiometrist
		3	Orthopedist	9	Follow-Up in Process
		4	Dentist	10	Others
		5	Eye, ear, nose, throat specialist		
15	Is Follow-Up Recorded? (Yes and No)			1	Yes
				2	No
16	Who Sent Information to the School?	0	No information	6	Optometrist (Eye doctor)
		1	Nurse	7	Audiometrist
		2	Parent	8	Guardian
		3	Pupil	9	Dentist
		4	Doctor		
		5	Special Education Teacher		
17	Who Recorded Follow-Up?	0	No information	6	Recorded but recorder not identified
		1	Teacher	7	Follow-Up in process (not completed)
		2	Nurse	8	Principal
		3	Special Education Teacher		
		4	Dean of Girls		
		5	Dean of Boys		

LIST OF SCHOOLS SAMPLED IN STUDY

COUNTY #1 - Malheur

1. Nyssa Primary
2. Nyssa Elementary
3. Nyssa Junior High School
4. Nyssa High School
5. Conklin School, Ontario
6. Pioneer School, Ontario
7. Aiken School, Ontario
8. Annex Elementary School
9. Rockville Elementary School
10. Ironside Elementary School
11. Westfall Elementary School
12. Jefferson School
13. Jordan Valley Elementary School
14. Lower Bend Elementary School
15. Beulah Elementary School
16. Ridgeview
17. Vale Union High School
18. Jordan Valley High School

COUNTY #2 - Jackson

1. Hover Elementary, Medford
2. Jackson Elementary, Medford
3. Jefferson Elementary, Medford
4. Lincoln Elementary, Medford
5. Oak Grove Elementary, Medford
6. Roosevelt Elementary, Medford
7. Washington Elementary, Medford
8. Wilson Elementary, Medford
9. Hedrick Junior High, Medford
10. McLoughlin Junior High, Medford
11. Medford Senior High, Medford
12. Bellview Elementary, Ashland
13. Walker Elementary, Ashland
14. Lincoln Elementary, Ashland
15. Ashland Junior High
16. Ashland Senior High
17. Jewett Elementary School, Central Point
18. Central Point Elementary School
19. Central Point Junior High
20. Crater High School, Central Point

21. Eagle Point Elementary School
22. Elk Trail Elementary School
23. Shady Cove Elementary School
24. Phoenix Elementary School
25. Phoenix High School
26. Jacksonville Elementary School
27. Jacksonville High School
28. Howard Elementary School
29. Griffen Creek Elementary School
30. Talent Elementary School
31. Talent High School
32. Lone Pine
33. Prospect Elementary School
34. Rogue River Elementary School
35. Applegate Elementary School
36. Butte Falls Elementary School
37. Butte Falls High School
38. Evans Valley Union School

COUNTY #3 - Marion

1. Pringle Salem Elementary School
2. Halls Ferry Elementary School
3. Keizer Elementary School, Salem
4. Zena Elementary School, Salem
5. Roberts Elementary School, Salem
6. Washington Elementary School, Salem
7. Highland Elementary School, Salem
8. Garfield Elementary School, Salem
9. Hoover Elementary School, Salem
10. Four Corners Elementary School, Salem
11. Candelaria Elementary School, Salem
12. Salem Heights Elementary School, Salem
13. Richmond Elementary School, Salem
14. McKinley Elementary School, Salem
15. Auburn Elementary School, Salem
16. Hayesville Elementary School, Salem
17. Morningside Elementary School, Salem
18. Cummings Elementary School, Salem
19. Englewood Elementary School, Salem
20. West Salem Elementary School, Salem
21. Bush Elementary School, Salem
22. Swegle Elementary School, Salem
23. Liberty Elementary School, Salem
24. Middle Grove Elementary School, Salem
25. Rosedale Elementary School, Salem

26. Leslie Junior High School, Salem
27. Judson Junior High School, Salem
28. Parrish Junior High School, Salem
29. Waldo Junior High School, Salem
30. North Salem High School, Salem
31. Lincoln Elementary School, Woodburn
32. Washington Elementary School, Woodburn
33. Stayton Elementary School, Stayton
34. Eugene Field Elementary School, Silverton
35. Sublimity Elementary School
36. Marion Elementary School
37. Jefferson Elementary School, Jefferson
38. Jefferson High School, Jefferson
39. St. Paul Elementary School, St. Paul
40. St. Paul Union High School, St. Paul
41. Gervais Elementary School, Gervais
42. Gervais High School, Gervais
43. West Stayton
44. Parkerville Elementary
45. Macleay Elementary School
46. Silver Crest Elementary School
47. Bethel Elementary School
48. Labish Center Elementary School
49. Riverside Elementary School
50. Shaw
51. McKee
52. Crooked Finger Elementary School
53. Central Howell Elementary School
54. St. Louis Elementary School
55. Detroit Elementary School
56. Willard Elementary School
57. Marion Grade School
58. Scott Mills Elementary School
59. North Santiam Elementary School
60. Buena Crest Elementary School
61. Pratum
62. Pioneer Elementary School
63. North Howell
64. Butteville Elementary School
65. Monitor Grade School
66. Eldredge Grade School
67. Fruitland Grade School

COUNTY #4 - MultnomahEnrollment

1. Lynch (3 schools)
2. Gilbert Primary (Grades 1-2-3)
3. Gilbert Elementary (Grades 4-8)
4. Cherry Park
5. Rockwood (2 schools)
6. North Rockwood (Grades 1-5)

1560

550

850

600

850

500

4910

Blank lined paper for writing.

[illegible]

STATE PRINTING

HISTORY OF PAST AND CURRENT ILLNESS, ACCIDENT, DISABILITY, AND ABSENCE

REASON FOR PAST AND CURRENT ILLNESS, ACCIDENT, DISABILITY, AND ABSENCE

OBSERVATIONS BY TEACHER

[illegible]

CODE V=DEFECT Y=UNDER TREATMENT C=CORRECTED R=REFERRAL NT=NO TREATMENT NEEDED

STATE PRINTING

June 15, 1955

STATE BOARD OF EDUCATION REGULATIONS
PERTAINING TO HEALTH AND PHYSICAL EDUCATION PROGRAMS
IN OREGON SCHOOLS

A. Health instruction and physical education required. District school boards shall provide in their respective schools, programs of health instruction and physical education for the development of health and physical fitness for all elementary school pupils in such schools and for the high school students as provided in paragraphs (1 and 2) of Section (Aa) of these regulations in order to promote, develop and maintain among pupils at all age levels optimum physical growth, health and physical fitness.

(Aa) The present legislation on health and physical fitness (ORS 336.190-336.220) shall be adopted as the state standard with the following exceptions:

1. Physical education and health shall be required in grades 9 and 10 with the exceptions indicated in the law. (health and religion)
2. The requirement of physical education and health of pupils in grades 11 and 12 shall be left to the option of the school district. While it is recommended that physical education and health be provided by the districts through the four years of the secondary school, the local school district may:
 - a. Make physical education and health mandatory of all pupils in grades 11 and 12 with excuses to be accepted for reasons of health and religion.
 - b. Offer health and physical education on an elective basis to pupils in grades 11 and 12.
 - c. Choose not to offer any health or physical education to pupils in grades 11 and 12.

3. The physical education program shall be so planned as to develop as minimum essentials normal symmetrical growth, organic vigor, strength and endurance, good posture, skills of bodily movement and coordination, and high levels of such qualities as agility, strength, speed, power, endurance, flexibility, balance, relaxation and such other physical qualities as the Superintendent of Public Instruction may deem important.
4. The health instruction program shall be planned to give instruction in personal hygiene, community health and sanitation, communicable diseases, nutrition, mental health, safety education, first aid, choice and use of health services and health practices, structure and functioning of the human body, physiological effects of exercise and effects of alcoholic beverages and narcotics upon the human system.

B. State direction of program. The health instruction and physical education programs shall be under the general direction of the Superintendent of Public Instruction. He shall:

1. Prescribe for, with the advice of the State Board of Health, a program of health examinations of pupils in the elementary and secondary schools necessary to achieve the purposes of Section A.
2. Provide and recommend program materials consisting of such elements as sports activities, developmental activities, disciplinary exercises, corrective exercises and rhythmic, provide and recommend informational materials, teaching techniques, and suggest class schedules such as shall be suitable to the achievement of the purposes of Section A in schools of various types and sizes.
3. Provide checks and standards by which the progress of individual pupils can be evaluated, and the schools rated in terms of their meeting the purposes of this program.

4. Coordinate the activities of the governmental agencies which carry on functions in the schools related to the purposes of Section A.
5. Employ in his office the necessary trained personnel to plan, supervise, direct and evaluate the programs conducted in the schools.
6. Make such rules and regulations as are necessary for the implementation of this program.

C. Responsibility of county and city school superintendents under health and physical education program. County school superintendents and city school superintendents shall carry out rules and regulations laid down by the Superintendent of Public Instruction for the implementation of this program.

D. Excuse from participation in health and physical education programs. (1) Upon request by the parent of a high school pupil, and after consultation between such parent and the pupil's high school principal, the principal may partially or totally excuse such pupil from participation in the high school physical education and health program for such part of the last two years of the pupil's high school studies as is agreed upon between parent and principal. If the parent and principal are unable to agree, the matter may be submitted for final decision to the governing body of the school district operating the high school which such pupil attends.

(2) Any pupil who objects to the provisions in Sections A, B or C on constitutional or religious grounds shall not be required to submit himself to the specific requirements to which objection is made when his constitutional rights will be violated, if a statement of such objection signed by a parent or guardian of the pupil is presented to the district school board.

State Department of Education
REX PUTNAM, Superintendent
Salem, Oregon