PROVINCE OF BRITISH COLUMBIA

Fortieth and Forty-first Reports

of the

Medical Inspection of Schools

For the Years Ended June 30th

1951 and 1952

VICTORIA, B.C.
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1953

DEPARTMENT OF HEALTH AND WELFARE,
VICTORIA, B.C., November 25th, 1953.

To His Honour CLARENCE WALLACE, C.B.E.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Reports of the Medical Inspection of Schools for the years ended June 30th, 1951 and 1952.

ERIC MARTIN,
Minister of Health and Welfare.

DEPARTMENT OF HEALTH AND WELFARE,
VICTORIA, B.C., November 25th, 1953.

The Honourable Eric Martin,
Minister of Health and Welfare, Victoria, B.C.

SIR,—I have the honour to submit the Fortieth and Forty-first Reports of the Medical Inspection of Schools for the years ended June 30th, 1951 and 1952.

I have the honour to be,
Sir,
Your obedient servant,

G. F. AMYOT, M.D., D.P.H.,
Deputy Minister of Health.

Fortieth and Forty-first Reports of the Medical Inspection of Schools

(A Report of School Health Services)

This Report contains information and statistics in relation to school health services as conducted in the schools of British Columbia during the years ended June 30th, 1951, and June 30th, 1952.

TRENDS IN SCHOOL HEALTH SERVICES

Recent reports outlining the school health services in British Columbia have emphasized changing concepts which are influencing the changing attitude of the school health services. There was first the realization that the school-child could not be segregated from the rest of the community, as he was actually a definite member of a family group within the community. It became evident, therefore, that the health of the school-child was dependent on the health services provided for the community as a whole, rather than on the provision of school health services alone. It became increasingly apparent that the more effective and more extensive the general health services, the fewer health problems there would be in the schools.

At the same time, evidence was multiplying indicative of the need to provide concentrated service for certain individual children while providing routine service for the pupils as a whole. The prevention of disease, psychosomatic disturbances, the relation between medicine and the social sciences have all become legitimate subjects of concern to the medical profession, and the health of the child has become an object of education. "The Manual of School Health Procedures," Department of Health, City of New York, has very ably summarized this, as follows:—

> Behind us are the days of emphasizing great numbers of routine inspections and examinations which supposedly gave the administrator a cross-section of the health status of the whole school population but which, without doubt, revealed little about the well-being or progress about the individual child. Today the individual child and his specific needs are of chief concern.
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> Behind us are many outmoded methods of controlling communicable disease, but ahead of us are such unsolved problems as the prevention of rheumatic fever, dental caries, problems that must remain unsolved until medical science reveals their causes.
>
> Behind us also are over-specialized, independent, unco-ordinated efforts in caring for such problems as defective vision and hearing, and emotional disorders. Before us is the need to fit these activities into proper relationship through a comprehensive, over-all administrative program so planned as to conserve our resources and at the same time serve the individual in the best possible manner.
>
> Discarded is the concept that school children owe their favourable health status solely to medical examinations and administrations of school teachers and nurses. Today we see so much more clearly than we did a generation ago that the prenatal instruction given mothers, better professional attention at birth, training in infant nutrition and care, early immunizations, improvements in housing, advances in sanitary conditions of neighborhoods, protection of milk and other foods, introduction of playgrounds, planned community attacks on tuberculosis and other communicable diseases—all can make their contributions. We have learned that without the co-operative functioning of each of these services, today's children cannot achieve well-being.

Thus, improved community health services are reflected in the health of the school-child. The school health programme, as it is developing, has several objectives:—

(1) It is designed to present an appraisal of the child, physical, mental, emotional, and social. What are his assets, his liabilities? What needs to be done to help this child achieve a level of health commensurate with his potentialities for health?

(2) How can each child in school be considered as an individual? Unless a way is found to accomplish this end, the knowledge of the principle of the individual differences is to no avail.

(3) How can the school environment be improved so that the growth and development of the child will not be impeded? The concern here lies with both the sanitation and emotional environment; that is to say, the emotional environment of the classroom, including such factors as the effect of the teacher's personality, the routines and disciplines imposed on the children.

(4) How can an educational programme be developed in the school which enables a child to learn how to make judgments which affect health behaviour.

These, then, are the main considerations in the school health programme—health service, health guidance, health instruction, and school environment. In order to accomplish this, the education and school health personnel are required to reorient their efforts so that consideration is given to the needs of the children in developing a programme that meets the mental, emotional, social, and physical needs of this age-group.

The classroom teacher is the foundation-stone in programme success. The good teacher's observations can be invaluable to the school physician. The teacher should not be content with a cursory " morning " inspection for rashes or dirty finger-nails; she should be constantly alert for signs of deviation from normal. Such signs may be transient and dramatic—the flushed face in the afternoon that may indicate fever and an on-coming infection, or may be gradual and obscure, such as a slowly growing inattentiveness in a child whose hearing or vision is failing, or whose home situation is becoming difficult. It is becoming increasingly clear that the teacher has much to offer to the physician, and that she should be encouraged to make more careful observations, not to make diagnoses such as enlarged tonsils, but to note these things that can be observed, such as the child commencing to squint when he looks at the blackboard, leave the room more often to urinate, or to change his normal patterns of behaviour.

These observations can be imparted to the public health nurse, who can correlate them with her knowledge of the case-history of the child. The teacher-nurse conference may provide sufficient information leading to satisfactory treatment, but in other instances the support of the parents, family physician, and others will be required. The public health nurse serves to link up the school with the health and welfare of the community.

ADMINISTRATION IN SCHOOL HEALTH SERVICES

Arising from the fact that school health services cannot operate efficiently and effectively apart from community health services has been the proposal that School Boards unite their school health services with municipalities in a Union Board of Health, to have the school services administered by the health-unit staff as an integral part of the complete community health service. Throughout the years more and more district School Boards have become reconciled to that approach and have transferred the school health services to Union Boards of Health, on which the School Board has individual representation. During 1951 nine school districts—namely, No. 4 (Invermere), No. 18 (Golden), No. 12 (Grand Forks), No. 13 (Greenwood), No. 32 (Hope), No. 55 (Burns Lake), No. 47 (Powell River), No. 50 (Queen Charlotte), and No. 36 (Surrey)—joined the Union Board of Health, while in 1952 nine additional School Boards united in the establishment of two new health units—namely, the Boundary Health Unit with headquarters at Cloverdale and the South Central Health Unit with headquarters at Kamloops. The individual Boards include No. 36 (Cloverdale), No. 37 (Ladner), and No. 35 (Langley) in the Boundary Health Unit, and No. 24 (Kamloops), No. 25 (Barriere), No. 26 (Birch Island), No. 29 (Lillooet), No. 30 (Ashcroft), and No. 31 (Merritt) in the South Central

Health Unit. In addition, School District No. 34 (Abbotsford) joined the already existent Upper Fraser Valley Health Unit with headquarters at Chilliwack. This provides seventy of the seventy-eight school districts with school health services through health units, a very definite step forward in consolidation of community health services to include school health services.

METHODS OF EXAMINATION

There continues some questioning as to the best procedures to follow in arriving at a decision of the physical status of school-children. Increase in the school population and development of a greater number of schools necessitate the need for school medical staff to analyse the procedures presently being employed to determine those that are practical in terms of results, and to develop new procedures to provide maximum service to the maximum number of pupils, with concentration on the individual pupils who are most in need of medical services. It has become self-evident that an annual physical examination for every pupil cannot be justified and might not be entirely warranted. A glance at Table I indicates that something over 93 per cent of the children examined have been in the A group, exhibiting minor defects or none at all. The annual routine examination of this group is time-consuming and yielding of unproductive results, other than confirming their physical fitness in terms of clinical assessment. It would seem to be much more valuable to spend time on the slightly more than 6 per cent in B Group and considerably more time on the 0.1 per cent in C Group. Over the past few years it has become customary, in so far as routine school medical inspections are concerned, to confine them to Grades I, IV, VII, and X, with screening selection of the intervening grades. This is reflected in the statistical analysis of the school medical examinations, in Table IV, in which the percentage of pupils enrolled in those grades and examined is considerably greater than that shown in Table III, showing the percentage of pupils examined in all grades of school.

It is evident from Table III that the number of pupils in grades examined has continued to increase year by year, from 121,542 in 1948 to 161,408 in 1952. At the same time the actual number of pupils examined has remained fairly constant throughout the years. There has been an approach to leave some of the routine services to concentrate on the children exhibiting emotional or physical deviations, while providing a greater measure of service to the children in school. At present annual medical inspections are provided to all students in Grades I, IV, VII, and X. There is some question as to whether these examinations are necessary in all four grades, and consideration is being given to limiting them to Grade I and one other grade. These questions are being raised while endeavours are being made to develop screening methods which will permit selection of the pupils who need more medical attention. Thus certain mass testing procedures become necessary, and the one that has received the greatest attention in British Columbia thus far has been the study of the Wetzel Grid as a screening tool. It provides an assessment of the physical status of the children on the basis of height-weight measurements related to chronological age, plotted on a special graphical chart. If, as a result of consecutive plottings, the individual growth curve shows a deviation from a preferred channel of growth, it is argued that something must be wrong, physically, nutritionally, or emotionally, and the child should be thoroughly investigated. The method was very carefully analysed over two years in the school health services, and a report presented to indicate that continued use of the grid as an ancillary to the physical examination by public health nurses and School Medical Inspectors seems warranted. Arising from that work, the Wetzel Grid has continued to be the screening tool in the sixty schools of the Central Vancouver Island Health Unit, and during the year an extension of the programme was undertaken in the North Okanagan Health Unit, where the grids were adopted for use in the school medical services for Grade I pupils only. Gradual expansion will be undertaken as grades are added for the incoming Grade I classes. As the South Central Health

Unit became organized, Wetzel Grids were added to that school health programme also, so that as of June 30th, 1952, three health units in the Province were using the Wetzel Grid as a screening tool.

In addition, the nurse-teacher and the nurse-parent conference serves as another screening method which selects the pupils exhibiting physical or emotional deviation requiring intensive medical examination to determine, if possible, the causative factor and possible treatment. This still seems to offer definite advantages in selection of the pupil while concentrating the time and skill of the school medical staff for those pupils most in need of it. It thus seems that a chain of responsibility exists in referral of the pupil by the teacher to the nurse, by the nurse to the parent, the parent to the family physician, the family physician to the specialist, followed by adequate treatment and follow-up of the treatment, usually again by a combination of parent-teacher-nurse-physician. It is only in this way that the facilities of the school and the medical services can be expected to yield the maximum results in promoting the health of that smaller percentage of B and C Groups, while maintaining the health of the larger percentage of A Group.

Also during this period, inquiry was made into the procedures of visual testing in schools in an endeavour to ascertain if present Snellen Chart methods could be improved. The Snellen Chart test is the most widely used for the purpose of vision testing, acting again as a screening tool to select those pupils showing visual defects requiring more intensive examination. It has been found that children with inability to read letters on the Snellen Chart at an average distance do require more specialized examination, but the question arose as to whether some children were being neglected, having other visual defects not detected by Snellen Chart testing. The inquiry complemented a study made two years ago when reliable information indicated that the adequately lighted Snellen Chart was the most satisfactory method. Inquiries conducted in 1951 again substantiated the properly lighted Snellen Chart as a very efficient vision-testing technique. It was borne out that adequate illumination to approximately 10 foot-candles can be obtained by placing a gooseneck lamp reflector on each side of the chart 3 feet away, each lamp containing a 100-watt daylight bulb. With this method it was definitely borne out that few additional defects of serious import are likely to be detected through specialist examination, and that the extra time and expense of examining every school-child along those lines would be unnecessary and wasteful of public funds. After careful consideration of all the facts, the effectiveness of the programme, the personnel, time, and money involved, it was recommended to continue the Snellen Chart screening method, coupled with parent-teacher-public health nurse referral, as constituting the most ideal visual testing method for all practical purposes.

DENTAL HEALTH SERVICES

During the school-year 1950–51 arrangements finally were completed whereby it was possible for full-time dental officers to be appointed to the health units of the Province. During that year the Union Boards of Health of nine health units, with the agreement of the majority, if not all, of their respective Boards of School Trustees, requested this service and agreed to contribute toward its cost. Nevertheless, no suitable applicants to these appointments presented themselves until the summer of 1951.

However, during this year, in ten communities outside the metropolitan areas, clinics were organized for the younger children in the offices of private dentists on a part-time sessional basis. The Health Branch made grants to such programmes on the basis of 50 per cent of the total remuneration paid to the dentist. The balance of the cost of the programme has been met by community resources, and to offset this a flat fee, usually between $2 and $5, has been charged to the parents of children receiving treatment.

In an endeavour to provide this type of service to communities without a resident dentist, sets of transportable dental equipment, especially designed by the Division of

Preventive Dentistry, were loaned during the summer of 1951 to dental practitioners willing to undertake this type of programme when visiting a more remote community. By this means such programmes were carried out for the younger children at Port Alice, Port Hardy, Bella Coola, and the more remote parts of the Seechelt Peninsula and adjacent islands.

Nevertheless, during the school-year 1951–52 full-time preventive dental services operated continuously in five health units, in which the service was provided to fourteen school districts, and during some months of the year in two other health units to an additional five school districts. Seven hundred and fifty-two pre-school children were restored to dental health—that is, received complete treatment—and they, and in most cases a parent, were instructed in the prevention of dental disease. One thousand five hundred and six Grade I pupils similarly benefited. In the five health units which operated continuously throughout the year, 61 per cent of the Grade I enrolment requested the service and a further 11 per cent made arrangements with their family dentist. Of those requesting the service, 91 per cent received complete treatment. In all, in these Grade I classes, 67 per cent of the children were restored to dental health either by the family dentist or the dental director of the health unit. The urgent need for this type of service was revealed by the fact that of these children no less than 81 per cent had never before visited a dentist.

During this year it was also possible to increase significantly the grants made by the Health Branch toward the costs of the school dental services provided within the metropolitan areas.

In all, twenty-nine school districts were in receipt of preventive dental services provided by full-time dental officers, and another school district was served by a dentist providing half-time services.

In addition, in a further fourteen school districts, dental clinics were organized in which private dental practitioners provided regular services in their own offices for the younger children of the community on a clinic basis. Sets of transportable equipment were forwarded to Merritt, Slocan City, and Ganges so that dentists might regularly visit these communities to provide clinics for the younger children. In addition, a further set of equipment was also issued on permanent loan so that a dentist might similarly visit Kitwanga, Hazelton, and Usk. During the fiscal year 1951–52 no less than 1,874 children were restored to or maintained in dental health through these clinics.

Through School Medical Inspectors, full-time dental officers, and public health nurses, audio-visual and visual teaching aids for dental health education have continued to be provided to schools. It cannot be stressed too strongly that to-day the vast majority of dental disease can be prevented. The teaching within the health curriculum of schools of the latest and accurate information as to how dental disease, and especially the scourge of dental decay, can be prevented cannot therefore be too strongly recommended. The Health Branch, through its field staff, stands ready to give every possible assistance to School Inspectors, school principals and teachers in this regard.

PUBLIC HEALTH NURSING SERVICES

Since the last Report, public health nursing service has been extended to the following school districts: No. 50 (Queen Charlotte Islands), No. 31 (Merritt), and No. 12 (Grand Forks).

The public health nurse continues to offer health supervision to school-children as part of the community health service provided from a local health unit. The public health nurse visits the schools in her area regularly and offers certain nursing services to the school-children, and provides consultative assistance to the teachers in health matters.

In the school the public health nurse assists with school medical examinations, screening tests such as vision and hearing, arranges for immunizations, chest X-rays, etc. She advises concerning the control of skin infections, communicable diseases, and first-aid measures in the school.

Through conferences with the teachers, parents, and pupils, she works toward the improvement of the physical health of the school-child. While visiting in the homes of school-children, she is in an excellent position to interpret health practices to parents, while at the same time she assists parents to understand the need for specific action. She encourages parents to correct defects and refers children needing financial assistance for this purpose to suitable agencies. She acts as liaison between the school and the home.

During the school-years 1950–51 and 1951–52 public health nurses assisted with 68,255 medical examinations and completed 141,331 nurses' examinations. The public health nurses held 89,563 conferences with members of the school staff, 82,904 with school pupils, and 17,329 with parents. There were 12,081 first-aid demonstrations. A total of 65,738 visits was made by the public health nurses to homes of school-children. Of these visits, 44,755 were for general health supervision, 1,729 were for mental hygiene, while 17,432 were for skin infections and communicable diseases.

Nursing-care service in the home was rendered to 1,822 school-children.

HEALTH EDUCATION

The importance of health from the point of view of the individual and the community has been well recognized by the educational authorities in this Province, with the result that health teaching has been given an important place in the school curriculum. Because of the many opportunities which present themselves in the school for providing information and for influencing attitudes and habits in a practical manner as they relate to health, teachers are discussing more and more their health-teaching problems with full-time local public health personnel and are making use of the information and assistance provided by them and by the Division of Public Health Education of the Provincial Health Branch.

One of the major problems among teachers who took their teacher-training prior to the introduction of the courses in Effective Living is that of information regarding community health and local public health services. Although local health-unit personnel have been providing information to teachers in their areas, the presence of a health educator in the Central Vancouver Island Health Unit (headquarters at Nanaimo) has effected a clearly defined liaison between that unit and the teachers in School Districts Nos. 65 to 70 through, firstly, interpretation of health-unit services and, secondly, familiarization with the visual aids maintained in the library of the Division of Public Health Education.

As in the past, this Division continues to provide as much practical assistance as possible to encourage a more active health education programme in schools by supplying pamphlets, posters, films, film-strips, and statistical data to teachers and principals through their local health services. It is heartening to note that greater use of these facilities, especially with respect to films, is being made by teachers throughout the Province.

NUTRITION SERVICES

During the school-years under review two methods of nutrition education—namely, dietary studies and rat-feeding experiments—have proven particularly effective in encouraging children and their families to improve their food selection for their own well-being.

Dietary studies were conducted in thirty-eight schools in districts on Vancouver Island, the Fraser Valley, East Kootenay, and Northern British Columbia. These studies were carried out under the supervision of the teacher and the public health nurse as a school health project. The children recorded all the foods they ate over a three-day

period, and these records were analysed to obtain a clearer picture of the pattern of food consumption for the group. It has been found that this type of study aroused a good deal of interest among children and their parents in addition to providing needed information for teachers and public health personnel regarding dietary problems in their area. In each area it was found that the three chief deficiencies in the children's diets were milk, a Vitamin D supplement, and foods rich in Vitamin C. It was also noted that the majority of children consumed liberal amounts of meat, potatoes, and bread, and in many cases excessive amounts of sweet food such as cake, candy, and soft drinks. As a result of these findings, it has been recommended that nutrition education in the schools give particular emphasis to the need and value of milk, Vitamin D supplement, and foods rich in Vitamin C, as well as practical methods of reducing excessive consumption of sweet foods. Pamphlets, films, and film-strips emphasizing these points have been widely distributed for the use of teachers and public health personnel.

A very effective method of following up dietary surveys has been the rat-feeding experiment. The purpose of these experiments is to demonstrate to children and parents the benefits and help that may be derived by a good selection of food as contrasted to a poor selection of food. During the first four weeks, one pair of rats is fed a variety of food recommended in Canada's Food Rules and the other pair receive such foods as soft drinks, white bread, cake, and candies. After about four weeks the difference in weight, appearance, and disposition between the two pair of rats is readily noted by the children. This type of rat-feeding experiment was introduced into 120 schools outside of the Greater Vancouver area during the two school-years under review. Teachers and public health nurses were asked to assist in evaluating the effectiveness of this experiment by reporting on the results obtained in their area. Detailed reports were received from all areas. A summary of the reports revealed that the rat-feeding project stimulated considerable interest in the study of food among the children in the classroom. In most areas this interest was carried over to the parents in the community. The majority of the experiments were displayed at Parent-Teacher Association meetings or during parents' day at the school.

Considerable assistance has been provided to schools relative to school-lunch programmes. The nutrition consultant and local public health personnel have provided information to school authorities on such matters as equipment requirements and layout for school cafeterias, economical methods of preparing food at school, and large-quantity recipes and menus.

HEALTH OF THE SCHOOL-CHILD

Consistent with the findings of previous years, physical examinations of school-children during 1951 and 1952 have revealed the vast majority of them to be in good physical condition clinically. Table I, shown below, reveals slightly over 93 per cent are in satisfactory condition clinically, either excellent or having minor physical defects showing no effect on their health.

TABLE I.—PHYSICAL STATUS OF PUPILS EXAMINED, SHOWING PERCENTAGE IN EACH GROUP, 1945–46 TO 1951–52

Academic Group	Percentage of Pupils, A Group[1]	Percentage of Pupils, B Group[2]	Percentage of Pupils, C Group[3]
1945–46	90.4	9.0	0.6
1946–47	91.1	8.3	0.6
1947–48	91.7	7.8	0.5
1948–49	93.3	6.4	0.3
1949–50	93.4	6.5	0.1
1950–51	93.1	6.8	0.1
1951–52	93.5	6.4	0.1

[1] A Group: A, Ad, Ae and Ade categories.
[2] B Group: Bd, Be, and Bde categories.
[3] C Group: Cd, Ce, and Cde categories.

In addition to the excellent physical status of the average British Columbia school-child, the greater number of pupils (well over 75 per cent in each group) are immunized against the major communicable conditions, such as diphtheria and smallpox, and continue to maintain their immunity status throughout their school-life. This is an encouraging trend, particularly as the percentage immunized in each grade has improved over past years, and, as is evident in Tables XI and XII, was further improved in the school-year 1951–52 over that pertaining in the previous year, 1950-51. There remains a need for continual vigilance in this matter of population immunization, however, since cases of diphtheria do continue to occur, as is evidenced in the rates of 0.4 case per 100,000 population in 1951 and 0.9 in 1952. Here again, however, there was a decrease in the incidence of cases over previous years, and it may be that the improved immunization picture had something to do in the control of that infection.

Immunization against other communicable infections is also evident from these tables, although considerably lesser numbers are involved. This is to be expected, firstly, in respect to scarlet fever, since the newer methods of treatment, using antibiotics, have rendered this infection less serious than formerly, and control measures can be established through prophylactic treatment with these same antibiotic or chemotherapeutic agents. Consequently, since the immunization procedures involving five injections were extremely time-consuming in administration, were painful in so far as the individual was concerned, and were of questionable value in maintaining immunity status, the organization of immunization clinics for this purpose has lessened, only being offered to those pupils remote from medical care or definitely requiring immunization on the recommendation of their physician.

In so far as pertussis (whooping-cough) is concerned, immunization is specifically recommended for the very young, between the ages of 6 months to 2 years, in which this particular infection is most likely to be fatal. As the child becomes older, the need for pertussis immunization becomes lessened, as is borne out by the tables, which show a very high level of protection in young children in the lower grades, but less and less in the higher grades. The fact does remain, however, that pertussis constitutes a definite threat in British Columbia, as shown in Table II, in which the number of cases created a rate of 97.3 per 100,000 population in 1951 and 81.5 in 1952. Although this was considerably lower than the rate of 152.9 in 1950, it was significantly greater than the rate of 19.2 in 1949, and indicates that concentration of immunization in the young age-groups is definitely warranted.

TABLE II.—IMMUNIZATION STATUS OF TOTAL PUPILS ENROLLED, ACCORDING TO SCHOOL GRADES, 1950–51

	Total Pupils Enrolled by Grades	Percentage Immunized				
		Diphtheria	Scarlet Fever	Smallpox	Pertussis	Typhoid
Total, all grades	154,517	77.1	18.4	75.7	29.1	19.3
Grade I	18,913	73.6	9.2	69.1	49.0	11.1
Grade II	18,479	75.5	11.6	73.5	45.9	15.5
Grade III	17,188	78.6	15.2	76.8	42.7	17.6
Grade IV	16,002	81.1	17.3	78.9	37.8	20.1
Grade V	14,706	79.8	19.5	78.2	29.3	21.3
Grade VI	13,474	80.7	21.6	81.1	20.6	22.0
Grade VII	13,140	80.7	24.1	79.7	17.0	21.6
Grade VIII	12,181	76.3	24.8	76.6	13.8	22.6
Grade IX	10,546	75.6	25.0	75.4	11.7	23.5
Grade X	8,436	72.9	23.6	72.7	9.1	21.7
Grade XI	6,358	72.3	21.4	71.6	6.9	21.8
Grade XII	4,607	70.5	23.2	72.5	6.6	20.8
Grade XIII	487	70.6	39.8	72.9	4.1	42.1

TABLE III.—IMMUNIZATION STATUS OF TOTAL PUPILS ENROLLED, ACCORDING TO SCHOOL GRADES, 1951–52

	Total Pupils Enrolled by Grades	Percentage Immunized				
		Diphtheria	Scarlet Fever	Smallpox	Pertussis	Typhoid
Total, all grades	161,408	82.4	15.5	81.6	18.3	17.0
Grade I	19,079	81.2	8.2	73.6	53.1	8.1
Grade II	18,488	82.3	9.0	80.0	52.0	11.4
Grade III	18,520	82.8	11.1	81.2	47.7	15.2
Grade IV	17,374	83.4	14.0	82.4	42.1	16.9
Grade V	15,917	83.6	15.4	82.7	37.3	19.2
Grade VI	14,650	90.3	17.7	86.9	31.5	20.7
Grade VII	14,021	81.1	18.8	82.9	22.6	20.0
Grade VIII	12,425	81.1	21.1	83.3	18.8	20.5
Grade IX	10,951	78.2	21.2	83.1	12.5	20.7
Grade X	8,456	81.5	23.4	83.8	11.9	21.3
Grade XI	6,327	79.7	23.0	82.5	9.9	21.2
Grade XII	4,679	77.4	22.5	83.0	10.0	21.9
Grade XIII	521	75.6	27.4	79.7	6.3	25.7

Immunization against typhoid fever is carried on in certain areas of the Province where sanitation remains primitive, but is not routine or particularly recommended in those areas where protected water-supplies and water-carried sewage systems exist. This means that no typhoid fever immunization is offered in the large urban centres, where the bulk of the school population is concentrated. Consequently, the proportion of pupils immunized contained those pupils in more unsettled parts of the Province, where the figures are resultantly low.

The general health of the school-child during the 1951–52 period, as reflected in the communicable-disease incidence, would seem to be unfavourable. While there were gratifying decreases in the number of cases of diphtheria, and there was some decrease in the minor communicable infections of measles, mumps, and rubella over that existent in 1949–50, there were very unfavourable trends in major communicable infections such as influenza in 1951, scarlet fever and septic sore throat in both years, and, most seriously of all, in poliomyelitis in 1952. As a matter of fact, during 1952 British Columbia suffered the worst epidemic of poliomyelitis to date, with a rate of 49.6 per 100,000 population, almost twice as high as the previous high year of 1947, and considerably higher than the normal annual figure of 10 per 100,000 population. This disease continues to be a source of worry, since so little is known of its cause and control measures are still none too effective. The future holds some promise, however, as continued research is going on and hope is being held for development of immunization procedures which will effect more adequate control to decrease the ravages of this disease.

TABLE IV.—COMMUNICABLE-DISEASE INCIDENCE
(Rate per 100,000 population.)

	1951	1952
Conjunctivitis	32.1	28.9
Chicken-pox	572.5	523.0
Diphtheria	0.4	0.9
Influenza	946.9	45.7
Measles	538.0	686.7
Mumps	500.8	591.7
Poliomyelitis	7.9	48.7
Rheumatic fever	5.3	------
Rubella	196.4	165.8
Scarlet fever	355.8	347.5
Septic sore throat	25.7	44.7
Tick paralysis	------	------
Pertussis	97.3	81.4

During 1952 streptococcal infections exhibited a fairly high incidence comparable to the high incidence recorded in previous years (a rate of 347.5 in 1952, as compared with 359.6 in 1951). This incidence has been observed with some interest, as it is evident that it has been of extremely mild nature, with extremely few complications and little, if any, secondary familial spread. The incidence was most marked on the Coast and in the Kootenays, but occurred to a degree generally throughout the Province.

The downward trend in the number of cases of whooping-cough evidenced in 1951 was continued into 1952. This, while a gratifying result, emphatically points up an undue prevalence of this infection and concentrates attention, as already stated, for continued immunization in the lower age-groups.

Influenza, which reached a peak in 1951 with an unduly high number of cases, was a great deal lower in 1952. It continues to be the cause of a considerable amount of school absenteeism, and interest in the development of influenza vaccine is being observed as tests are conducted into the possibility of an effective prophylactic agent.

In spite of the somewhat unfavourable communicable-disease picture, it is felt that the health of the school-child during 1951–52 was consistently good. The physical status remained, on the whole, excellent, while the immunity status was definitely improved.

STATISTICS DURING 1950–51

There were 154,517 children enrolled in the grades examined. This was increased to 161,408 in 1951–52. Of the number of pupils enrolled, there was a somewhat decreased number examined as compared to previous years, only 29.8 per cent in 1950–51 and 26.3 per cent in 1951–52. As was already mentioned, this is low, but is due to the fact that concentration is on the pupils in specific grades and particularly those in commencing grades. Subsequent tables indicate that 64.6 per cent of Grades I, IV, VII, and X were examined in 1950–51 and 56.2 per cent in 1951–52, while well over 80 per cent of Grade I were provided a thoroughly complete physical examination on entering school. Usually this was done with the parent present and was productive of greater results as the parents endeavoured to ensure the child's complete preparation to a new phase of development and education. In the latter grades, screening methods were used to select the pupils most likely in need of physical examination. The results in detail are presented in the various statistical tables.

TABLE V.—PHYSICAL STATUS OF TOTAL PUPILS EXAMINED IN THE SCHOOLS FOR THE YEARS ENDED JUNE 30TH, 1948–52

	1947–48	1948–49	1949–50	1950–51	1951–52
Total pupils enrolled in grades examined	121,542	137,536	128,724	154,517	161,408
Total pupils examined	43,662	54,682	45,049	46,028	42,401
Percentage of enrolled pupils examined	35.9	39.8	35.0	29.8	26.3
Physical status—percentage of pupils examined—					
A	39.5	42.2	38.8	34.4	36.5
Ad	49.6	48.9	52.5	56.3	54.2
Ae	0.9	0.8	0.8	0.7	0.8
Ade	1.7	1.4	1.3	1.7	2.0
Bd	6.7	5.6	5.6	5.8	5.4
Be	0.2	0.2	0.1	0.1	0.2
Bde	0.9	0.6	0.8	0.9	0.8
Cd	0.3	0.1	0.1	0.1	0.1
Ce	.....	0.1	.....	.....	.....
Cde	0.2	0.1	.....	.....	.....

TABLE VI.—PHYSICAL STATUS OF TOTAL PUPILS EXAMINED IN GRADES I, IV, VII, AND X FOR THE YEARS ENDED JUNE 30TH, 1948–52

	1947–48	1948–49	1949–50	1950–51	1951–52
Total pupils enrolled in grades examined	76,624	50,519	41,688	56,491	58,930
Total pupils examined	53,244	38,377	30,515	36,468	33,118
Percentage of enrolled pupils examined	69.5	76.0	73.2	64.6	56.2
Physical status—percentage of pupils examined—					
A	37.6	40.6	38.8	34.8	36.7
Ad	52.4	50.7	53.3	56.3	54.7
Ae	0.8	0.7	0.6	0.6	0.7
Ade	1.4	1.3	1.0	1.7	1.7
Bd	6.6	5.9	5.6	5.5	5.2
Be	0.1	0.1	0.1	0.1	0.1
Bde	0.6	0.5	0.5	0.8	0.8
Cd	0.2	0.1	0.1	0.1	0.1
Ce	----------	----------	----------	----------	----------
Cde	0.3	0.1	----------	0.1	----------

TABLE VII.—SUMMARY OF PHYSICAL STATUS OF PUPILS EXAMINED, ACCORDING TO SCHOOL GRADES, 1950–51

	Total Pupils, All Schools	Examined in Grades			
		Grade I	Grades II–VI	Grades VII–IX	Grades X–XIII
Total pupils enrolled in grades examined	154,517	18,913	79,849	35,867	19,888
Total pupils examined	46,028	15,785	12,965	10,794	6,484
Percentage of enrolled pupils examined	29.8	83.5	16.2	30.1	32.6
Physical status—percentage of pupils examined—					
A	34.4	29.7	34.4	36.0	43.2
Ad	56.3	60.2	35.0	55.8	50.3
Ae	0.7	0.7	0.7	0.6	0.4
Ade	1.7	1.7	2.0	1.4	1.6
Bd	5.8	6.5	6.3	5.3	3.9
Be	0.1	0.1	0.1	0.1	0.1
Bde	0.9	0.8	1.3	0.7	0.4
Cd	0.1	0.2	0.2	0.1	0.1
Ce	-------	-------	-------	-------	-------
Cde	-------	0.1	-------	-------	-------

TABLE VIII.—SUMMARY OF PHYSICAL STATUS OF PUPILS EXAMINED, ACCORDING TO SCHOOL GRADES, 1951–52

	Total Pupils, All Schools	Examined in Grades			
		Grade I	Grades II–VI	Grades VII–IX	Grades X–XIII
Total pupils enrolled in grades examined	161,408	19,079	84,949	37,397	19,983
Total pupils examined	42,401	15,422	12,021	9,138	5,820
Percentage of enrolled pupils examined	26.3	80.8	14.2	24.4	29.1
Physical status—percentage of pupils examined—					
A	36.5	33.5	35.9	35.7	47.5
Ad	54.2	56.8	52.4	56.5	47.6
Ae	0.8	0.8	1.1	0.5	0.3
Ade	2.0	1.6	3.3	1.7	0.7
Bd	5.4	6.3	5.8	4.5	3.4
Be	0.2	0.2	0.2	0.1	-------
Bde	0.8	0.7	1.1	0.9	0.4
Cd	0.1	0.1	0.1	0.1	0.1
Ce	-------	-------	-------	-------	-------
Cde	-------	-------	0.1	-------	-------

TABLE IX.—PHYSICAL STATUS OF PUPILS EXAMINED, ACCORDING TO SCHOOL GRADES, 1950–51

	All Schools	Grade					
		I	II	III	IV	V	VI
Total pupils enrolled in grades examined	154,517	18,913	18,479	17,188	16,002	14,706	14,474
Total pupils examined	46,028	15,785	2,256	1,863	6,143	1,416	1,287
Percentage of enrolled pupils examined	29.8	83.5	12.2	10.8	38.4	9.6	9.6
Physical status—percentage of pupils examined—							
A	34.4	29.7	27.5	26.5	40.1	31.5	33.8
Ad	56.3	60.2	60.2	60.7	50.6	57.3	56.7
Ae	0.7	0.7	0.9	1.4	0.4	0.7	0.4
Ade	1.7	1.7	2.0	2.0	1.9	2.6	1.4
Bd	5.8	6.5	6.9	7.8	5.6	6.2	6.2
Be	0.1	0.1	0.4	0.1	0.1	0.1	0.2
Bde	0.9	0.8	1.8	1.2	1.1	1.3	1.3
Cd	0.1	0.2	0.1	0.2	0.2	0.1	.....
Ce	.....	.....	0.2	.....	.....	0.1	.....
Cde	.....	0.1	.....	0.1	.....	0.1	.....

	Grade						
	VII	VIII	IX	X	XI	XII	XIII
Total pupils enrolled in grades examined	13,140	12,181	10,546	8,436	6,358	4,607	487
Total pupils examined	8,936	1,054	804	5,604	506	341	33
Percentage of enrolled pupils examined	68.0	8.7	7.6	66.4	8.0	7.4	6.8
Physical status—percentage of pupils examined—							
A	36.0	35.6	36.7	41.6	50.0	57.8	66.7
Ad	56.0	56.4	52.7	52.0	42.1	37.8	15.2
Ae	0.6	0.3	1.1	0.5	0.2	.....	.....
Ade	1.6	0.6	0.9	1.7	1.0	0.6	.....
Bd	4.8	6.0	8.2	3.7	6.1	3.5	6.0
Be	0.1	0.1	.....	0.1	.....	.....	.....
Bde	0.8	0.8	0.2	0.3	0.6	0.3	12.1
Cd	0.1	0.1	0.2	0.1	.....	.....	.....
Ce	.....	.....	.....	.....	.....	.....	.....
Cde	.....	0.1	.....	.....	.....	.....	.....

TABLE X.—PHYSICAL STATUS OF PUPILS EXAMINED, ACCORDING TO SCHOOL GRADES, 1951–52

	All Schools	Grade					
		I	II	III	IV	V	VI
Total pupils enrolled in grades examined	161,408	19,079	18,488	18,520	17,374	15,917	14,650
Total pupils examined	42,401	15,422	2,179	2,054	5,289	1,395	1,104
Percentage of enrolled pupils examined	26.3	80.8	11.8	11.1	30.4	8.8	7.5
Physical status—percentage of pupils examined—							
A	36.5	33.4	29.5	29.3	40.9	34.2	38.9
Ad	54.2	56.9	56.4	56.5	49.0	53.1	52.3
Ae	0.8	0.8	1.0	1.6	1.0	1.3	0.6
Ade	2.0	1.6	3.8	3.7	3.1	3.2	2.3
Bd	5.4	6.3	7.2	7.3	4.9	6.7	4.6
Be	0.2	0.2	0.5	0.1	0.1	0.5	0.2
Bde	0.8	0.7	1.4	1.1	1.0	0.9	1.1
Cd	0.1	0.1	0.1	0.3	.....	0.1	.....
Ce	.....	.....	.....	.....	.....	.....	.....
Cde	.....	.....	0.1	0.1	.....	.....	.....

	Grade						
	VII	VIII	IX	X	XI	XII	XIII
Total pupils enrolled in grades examined	14,021	12,425	10,951	8,456	6,327	4,679	521
Total pupils examined	7,545	849	744	4,862	519	394	45
Percentage of enrolled pupils examined	53.8	6.8	6.8	57.5	8.2	8.4	8.6
Physical status—percentage of pupils examined—							
A	34.9	38.5	41.0	45.5	54.7	61.7	60.0
Ad	57.8	51.1	48.3	49.5	40.3	34.3	37.8
Ae	0.5	0.7	0.8	0.3	.....	0.3	.....
Ade	1.6	2.1	1.3	0.7	1.0	1.7	.....
Bd	4.1	5.8	7.5	3.5	3.7	2.0	2.2
Be	0.1	0.1	0.1	.....	.....	.....	.....
Bde	0.9	1.3	1.0	0.4	0.3	.....	.....
Cd	0.1	0.3	.....	0.1	.....	.....	.....
Ce	.....	.....	.....	.....	.....	.....	.....
Cde	.....	0.1	.....	.....	.....	.....	.....

TABLE XI.—PHYSICAL STATUS OF SCHOOL PERSONNEL, ORGANIZED AND UNORGANIZED TERRITORY, 1950–51

	Total	Organized	Unorganized
Total personnel employed in grades examined	4,910	4,256	654
Total personnel examined	473	427	46
Percentage of employed personnel examined	9.6	10.0	7.0
Physical status—percentage of personnel examined—			
A	97.0	99.5	73.9
Ad	1.7	0.5	13.0
B	.....	.....	.....
Bd	1.1	.....	10.9
C	.....	.....	.....
Cd	0.2	.....	2.2

TABLE XII.—PHYSICAL STATUS OF SCHOOL PERSONNEL, ORGANIZED AND UNORGANIZED TERRITORY, 1951–52

	Total	Organized	Unorganized
Total personnel employed in grades examined	5,118	4,352	766
Total personnel examined	408	363	45
Percentage of employed personnel examined	8.0	8.3	5.9
Physical status—percentage of personnel examined—			
A	98.5	100.0	86.7
Ad	1.5	------	13.3
B	------	------	------
Bd	------	------	------
C	------	------	------
Cd	------	------	------

FUTURE REPORTS

The development of Union Boards of Health and the administration of health services through health units makes it less desirous and less easy to separate health services in the schools from other health services in the community. As these are interrelated and co-ordinated, a report on a separate service does not fully interpret public health services on the single item. For this reason, future reports of school health services are to be included within the Annual Report of the Health Branch, Department of Health and Welfare.

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