GOVERNMENT OF INDIA

CENTRAL ADVISORY BOARD OF HEALTH

REPORT

on

THE MEDICAL INSPECTION OF SCHOOL CHILDREN AND THE TEACHING OF HYGIENE IN SCHOOLS

by

The Joint Committee appointed by the Central Advisory Board of Health and the Central Advisory Board of Education

(1941)

PRINTED BY THE MANAGER, GOVERNMENT OF INDIA PRESS, NEW DELHI,
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Report of the Joint Committee appointed by the Central Advisory Board of Health and the Central Advisory Board of Education to investigate and Report on the Dual Question of the Medical Inspection of School Children and of the Teaching of Hygiene in Schools.

CHAPTER I.

Introduction.

The agenda for the third meeting of the Central Advisory Board of Health in July 1940 included the consideration of a memorandum from the Government of the Punjab on the teaching of hygiene in schools, two memoranda from the Governments of Madras and the Punjab on the medical inspection of school children and a combined memorandum on the two subjects by the Educational Commissioner with the Government of India.

The Board considered that, owing to the magnitude and importance of the questions, they required fuller consideration and in a resolution asked the Chairman to appoint a committee to report on the subject. The resolution of the Board is as follows:—

> "The Board, having considered the memoranda submitted by the Governments of the Punjab and Madras and by the Educational Commissioner with the Government of India, on 'the teaching of hygiene in schools' and on 'medical inspection of children in schools', considers that the two subjects are closely related. Systematic attention to the health of children is an essential preliminary to any really remunerative system of instruction, whether it be on hygiene or other subjects in the curriculum. Where the physical condition of the child is unsatisfactory the money spent on educating him is largely wasted. The foregoing involves regular medical examination of school children, the treatment of illness and physical defects and the provision for undernourished children of such food as may be necessary to raise them to an average physical standard. Teaching is not likely to be a success if the general school environment does not conform to reasonable hygienic standards. Information is necessary as to what extent these requirements are met in the different Provinces and how best existing defects may be remedied at the least possible cost.
>
> The Board therefore recommends that the Chairman should appoint a special committee to report on the dual question of the teaching of hygiene in schools, primary as well as secondary, rural as well as urban and of the medical inspection of school children and their treatment and, in the primary stage, also their nutrition."

At their meeting in January 1941 the Central Advisory Board of Education were informed of the decision of the Central Advisory Board of Health, and they passed the following resolution:—

> "The Board considered the memorandum submitted on behalf of the Central Advisory Board of Health as the outcome of the discussion at its third meeting held in Poona in July 1940. The Board noted with satisfaction that their Chairman, who is also the Chairman of the Central Advisory Board of Health, proposed to appoint a Joint Committee to consider the steps which might be taken to improve the physical condition of school children. The Board decided to leave to the Chairman the selection of the educationists to serve on the proposed Joint Committee."

As a result the Hon'ble Member for Education, Health and Lands, appointed the following Committee:—

1. Major-General Sir Gordon Jolly, K.C.I.E., K.H.P., I.M.S., Director-General, Indian Medical Service.
2. Lieut.-Colonel E. Cotter, I.M.S., Public Health Commissioner with the Government of India.
3. Major-General W. C. Paton, K.H.P., I.M.S., Surgeon-General with the Government of Bengal.
4. Rai Bahadur Dr. A. C. Banerjea, Director of Public Health, United Provinces.
5. Lieut.-Colonel C. M. Ganapathy, C.I.E., I.M.S., late Director of Public Health, Madras.
6. John Sargent, Esq., C.I.E., Educational Commissioner with the Government of India.
7. S. N. Moos, Esq., I.E.S., Director of Public Instruction, Bombay.
8. Dr. W. A. Jenkins, I.E.S., Special Officer in the office of the Director of Public Instruction, Bengal.
9. Pandit Lakshmi Kanta Maitra, M.L.A.

The Committee met in New Delhi on the 3rd and 4th November 1941 under the Chairmanship of the Director-General, Indian Medical Service. All were able to attend with the exception of Pandit Lakshmi Kanta Maitra who was unavoidably prevented from doing so.

Before starting their deliberations the Committee decided to co-opt Dr. Jean Orkney, W.M.S., Director, Maternity and Child Welfare Bureau, Indian Red Cross Society, as a member.

The terms of reference to the Committee were sufficiently wide to include the examination of all those factors which have a bearing on the health of the school child. As health is to be interpreted in a wider sense than that of freedom from disease, the main points for consideration appeared to the Committee to be (1) the medical inspection of school children, (2) the treatment of the defects discovered, (3) the improvement of the nutrition of the pupils, (4) the provision of a reasonable standard of environmental hygiene, (5) the teaching, theoretical and practical, of

the principles of hygienic living, (6) physical education and (7) the development of healthy habits through the medium of corporate activities such as school camps and scout organisations.

In order to obtain information about the extent to which provision now exists in the Provinces and States for these activities, a questionnaire was sent by the Secretary of the Central Advisory Board of Health to Directors of Public Health asking that it should be completed in consultation with Administrative Medical Officers and Directors of Public Instruction. The information received in reply to the questionnaire was available for the members of the Committee before and during their discussions.

HISTORICAL.

As the movement to develop a school medical service in India has been largely influenced by the corresponding work done in England it will not be out of place to give a short account of the development of this service in that country. The foundations of the school health service in England were laid towards the end of the last century by a few local authorities to whom the high mortality rates during childhood had become a matter of concern and uneasiness. The schemes were at first local in nature and limited in scope. Impetus was given to the movement by the outbreak of the South African war. The medical examination of recruits disclosed a high incidence of defects, sufficiently serious to necessitate the rejection of a large number of men as unfit for active service. The publicity given to these findings quickened public consciousness to the necessity for improving the physical fitness of the nation's manhood.

A Royal Commission was appointed in Scotland to consider the question of physical training in schools. The Commission took a wide view of their duties and reported not only on the physical training and physique of the children but also on the unsuitability of many school buildings, the defective hygiene in schools and poor nourishment of the children.

The publication of this report greatly stirred the public mind and resulted in the appointment in England of an Inter-departmental Committee on Physical Deterioration which was soon followed by another Inter-departmental Committee on Medical Inspection and Feeding of Children attending Public Elementary Schools. The recommendations of the latter were published in 1905 and they formed the real starting point for the legislation directed since then towards the improvement of the health and life of the school child.

A big stride forward was taken in 1907 when the Education (Administrative Provision) Act was passed making a system of medical inspection of children in public elementary schools a statutory obligation on every local education authority. In this way a new branch of the national health service was brought into existence. That year also saw the appointment of Sir George Newman as Chief Medical Officer of the Board of Education. He lost no time in drawing up rules for the conduct of medical inspection and these rules were later issued as a memorandum. He also began the publication of reports which were the forerunners of the long series of admirable reports on the health of the school child published annually by the Board of Education. Sir George Newman

undoubtedly gave to medical inspection its breadth of outlook and its conception of the essential unity of the home and school life of the child, and he laid the foundations which have given the school medical services in England the high position which they hold to-day.

The Education Act of 1921 went a step further and made it compulsory for all authorities to make adequate arrangements for the treatment of children attending public elementary schools. It required the Education Committees of Counties and County Boroughs to extend the arrangements for medical inspection of boys and girls up to the age of 18 years attending municipal schools and gave powers to provide for their treatment.

The development of public health services in India has been of more recent origin and Provincial Governments have been largely concerned with the urgent problems of providing medical relief and of controlling the incidence of epidemic diseases which occur on a wide scale.

In the next paragraph a brief account is given of the development of the school medical service in Provinces and in certain States.

In the *N.-W. F. Province* a scheme for the medical inspection of school boys in Peshawar City was started in 1927 and in the succeeding ten years was extended to five other towns. In 1937 the medical inspection of school girls began in Peshawar City and later was extended to certain rural areas. In 1941 owing to the large number of doctors joining up from the Province for service in the Army the scheme has been temporarily discontinued except for school girls in Peshawar City. In *the Punjab* the medical inspection of school children and the inspection of school premises started in 1915 and was at first confined to secondary schools. No arrangements were made for treatment. In 1925 a revised scheme was introduced in five districts, medical inspection and treatment being provided for primary schools and colleges within a radius of three miles from a hospital or dispensary. The inspection was carried out by the hospital staff and the inspection of buildings and premises by the local health officers. In this way the work was divided between the medical and public health departments of the Province. The dual control was found to work unsatisfactorily and the whole scheme was transferred to the Medical Department in 1933. In 1937, there was another change of policy. In the towns in which wholetime health officers were employed the work was handed over to them. In the rural areas it continued to be under the supervision of the Medical Department. All the schemes applied only to school boys; the medical inspection of school girls has been carried out since November 1932 in certain areas under the auspices of the Junior Red Cross. In *Delhi Province* the medical inspection of school boys and girls was started in 1927 with wholetime inspecting staff for the urban, and part-time staff for the rural areas. The part-time services of an oculist and a dentist for New Delhi and the Notified Area were secured in 1937. The scheme is still limited to a certain number of schools in the Province and includes 16 girls' schools in urban areas. In *the United Provinces* a scheme was started in 1919 with the part-time employment of private practitioners and dispensary doctors to do medical inspection. In 1926 the Education Department appointed ten wholetime school medical officers for ten of the larger towns. At the same time municipal and district health officers were being appointed in different areas under

the Public Health Department so that in 1930 there were three separate agencies for school health work, namely (a) local school committees, (b) the Education Department and (c) the Public Health Department. In 1931 the control of the service was brought under the Public Health Department and at present wholetime school medical officers are employed in 13 large towns. The municipal health officers do the work in 21 smaller towns and in 27 still smaller towns the district health officer is the school medical officer. In *Bihar* medical inspection started in 1920 and a school medical officer with an assistant school medical officer was appointed for each division in the Province. A woman doctor was appointed for the whole province. At first the school medical officers were under the Inspectors of Schools, but in 1931 were brought under the control of the Public Health Department and this organisation exists up to now. Medical inspection is limited to high and middle schools in places where high schools already exist. *Orissa* follows the same lines as Bihar from which it was separated and has one school medical officer with an assistant medical officer and they work in high and middle schools. In rural areas the part-time services of dispensary doctors are utilised for the medical inspection of middle schools. A limited amount of medical inspection of school girls is done in three towns by women doctors. In *Bengal* a school hygiene branch of the Public Health Department was created in 1920 and inspections were carried out in municipalities where a health officer was employed. In 1928 a scheme for Calcutta came into force and three doctors were employed on a part-time basis with the voluntary services of an oculist and a dentist. In 1932, owing to retrenchment, the scheme was drastically reduced. In 1940 additional doctors were sanctioned and the school medical service was placed under the Director of Public Health. In *Bombay* a scheme was started in 1921 but was abandoned in 1922 as a measure of retrenchment. In 1938 the Government introduced physical education as a compulsory subject and required that satisfactory arrangements should be made to examine all pupils at the beginning of each year in order to determine their physical fitness. It is stated that in Government schools medical inspection is carried out by Government medical officers and secondary schools under non-official agencies make their own arrangements while local authorities have been asked to provide for medical inspection in primary schools through private practitioners or Government doctors. In *Madras* a scheme applicable only to recognised secondary schools was introduced in 1925 and was extended in 1928 to colleges and to elementary schools for boys in those areas in which compulsory education was in force. The scheme was suspended in 1932 owing to financial stringency and has not yet been revived and medical inspection is now confined to schools in the city of Madras and in the Poonamallee Health Unit. In *Hyderabad* medical inspection was started in 1935 in middle and high schools and was extended in 1937 to the primary sections of such schools. In *Baroda* medical inspection of school children in the city was started as far back as 1909 and has continued up-to-date on a limited scale. In 1925 medical inspection was extended to other places in the State with hospitals and dispensaries. In *Mysore* a scheme for medical inspection of school children was sanctioned in 1926 for Bangalore City. The scheme was confined to Government high and middle schools and was extended in 1927 to primary schools. In 1928 all the boys schools in the State were brought within the scope of the scheme wherever medical men were available to undertake

the work. At present medical inspection is carried out in the two cities of Bangalore and Mysore, in the headquarter towns of five districts, in 80 per cent. of taluk headquarters and in a few villages.

From this brief summary of the development of school medical service in the different Provinces and States it will be seen that the area covered by the service varies widely as well as the types of schools in which medical inspection is done. Medical inspection in girls schools is limited. The schemes seem to cater more for middle and high schools than for primary schools.

The Committee wish to draw special attention to the frequency with which a system of medical inspection has been started in a Province, only to be abandoned after a short while as a measure of economy. There have also been a number of instances of change in policy which seem to indicate that there has not been a clear appreciation of the fundamental necessity for and the essential characteristics of a school medical scheme calculated to promote the health of the school child. The Committee emphasise that satisfactory arrangements for school medical inspection and treatment form an essential part of any efficient system of public education.

CHAPTER II.

AIMS AND OBJECTS OF A SCHOOL MEDICAL SERVICE.

In his annual report for 1926 Sir George Newman, Chief Medical Officer of the Board of Education, England and Wales, summarised the functions of a School Medical Service as follows:—

1. To fit the child to receive the education provided for it by the State. But this must also mean to adapt educational methods to the natural physiological capacity and powers of the child. This involves a study and understanding of the sphere and compass of a child's physiology.
2. To detect any departures from the normal physiological health and growth, any impairments, aberrations, defects, or disease (physical or mental), and advise the remedy or amelioration of them (at the school or otherwise) lest worse befall.
3. To seek the causes and conditions (external and internal to the body of the child) of such defect and disease, and, as far as may be, prevent them.
4. To teach and practise personal hygiene in every school, so that a habit of hygiene may be contracted by the children, and the way of physiological life may be followed by each coming generation.

Newman further stated that the purpose of a school health service is "to prepare the child for education and for citizenship". To carry out this purpose a system has been devised in England by which a specially appointed doctor visits each elementary school at least once a year and examines every child at least three times during his school career, namely, as early as possible after joining the school, at eight years of age and lastly at twelve. This medical officer also examines all children referred to him for special examinations during the intervals by teachers and parents. Provision has been made, on a wide scale, for the treatment of the defects discovered during medical examination. The essential unity of the child's life in his home and in the school has been recognised and the school health organisation seeks to remedy or ameliorate as far as possible, the environmental and other factors which militate in the home and in the school against the child's attaining the full measure of his mental and physical development. The physical education of the child, an improvement of his nutrition, the inculcation of healthy habits by proper health training and the securing of the active cooperation of the parents by educational work among them are being pursued as an integral part of the campaign for improved school health.

The Committee are of opinion that the aims and objects of a School Medical Service as defined by Sir George Newman are applicable to India and consider it absolutely essential that in this country steps should be taken at any rate to ensure that those children who are attending school are healthy and kept healthy. This is essential not only from the medical point of view but from the educational point of view.

From the brief survey of the development of the school health services in India given in the last chapter it will be realised that they are rudimentary in type. During reorganisation and expansion, the rate of

progress in India cannot be the same as in England for various reasons which will be briefly indicated, and the organisation of a fully developed school health service for the country as a whole is a matter which cannot be completed in the near future. Nevertheless, it is justifiable to hold that, while the problem in this country may require for its solution a slower advance and, what is equally important, experimentation in the methods of administration and organisation suited to Indian conditions, the time has arrived for taking stock of the position and for making a determined effort to mobilise the available resources, particularly in the larger towns and cities, for developing as complete a school health service as circumstances permit.

One of the biggest difficulties to be overcome in India is the inadequate number of qualified doctors and nurses. In this country with its population of nearly 400 millions, the total number of doctors is only 40,000 or one doctor for an average population of 10,000. In England the proportion of doctors to the population is about 10 to 12 times greater. In England the school nurse plays a large part in the programme of treatment, health education and improving the environmental conditions of the child's home but in India the total number of registered nurses is only about 5,000. It will obviously take a considerable time to remedy these deficiencies and in the meantime alternative methods will have to be considered for meeting our requirements. Suggestions for alternative methods are made in the later sections of this report.

The majority of doctors in India are concentrated in the urban areas while nearly 90 per cent of the population live in the villages. The development of a school health service can therefore be carried out more easily in the larger urban centres. Apart from the higher proportion of medical men, the concentration of the school population within narrower limits in towns and cities, the better facilities for transport and for treatment and the existence of a public health organisation are other advantages which can be fully utilised in developing school health work in urban areas. In fact, in some of the large cities in India the available resources appear to be such as to make it possible to organise school health work on as wide a basis as has been done in the West.

CHAPTER III.

MEDICAL INSPECTION.

The replies to the questionnaire show that the percentage of children with one or more defects discovered during medical inspection in 1940 varies from 20 per cent. in Jodhpur to 87 per cent. in Coorg. The conclusion which the Committee feel justified in drawing from the figures before them is that probably fifty per cent. of the children attending school would be found to require medical attention or medical observation.

AGE OF ADMISSION TO SCHOOL.

That the provision for the care of the child in the pre-school period is far from adequate was shown in the report of the Maternity and Child Welfare Committee presented to the Central Advisory Board of Health at its second meeting. Even in those areas where maternity and child welfare centres are functioning, it is rarely that children after the age of three receive any special attention and at this period of their lives they are easily liable to develop defects. For this reason it is important that the gap between maternity and child welfare work and the school medical service should be narrowed as much as possible. Where maternity and child welfare work does not exist, the need for bringing the children under an inspection scheme at the earliest possible age becomes even more urgent.

The Committee consider that too much weight cannot be given to health considerations in determining the age at which children should be admitted to school. The Committee are of the opinion that the age of school entry which will enable a child to come under medical inspection should be not more than six and preferably five.

NUMBER AND NATURE OF EXAMINATIONS.

Three types of medical inspection are required in a scheme, namely (1) the full routine medical inspection at specified ages, (2) the re-inspection of children found defective at such routine inspections and (3) the special inspections of children selected by the parent or the teacher for examination by the doctor in the intervals between the routine inspections. The extent of these special inspections will depend on the ability of the parents, and still more so of the teacher, to recognise those children who are failing to develop satisfactorily either physically, mentally or socially. The basis of medical inspection of school children in England is their routine examination as early as possible after joining the school, at eight years of age and again at twelve. In that country there has been considerable discussion as to the most desirable number of such routine examinations. Some critics argue that they are a waste of a doctor's time because they involve the examination of large numbers of children who are found quite normal in order to select a minority suffering from defects. The critics urge that the defects discovered are generally of such a nature that they can be detected by an observant parent or teacher and brought to the notice of the doctor. However even the most enthusiastic protagonists for reducing the frequency of school medical inspections in England seem to regard two examinations as the minimum; one at the beginning and one at the end of the

school career. In India the frequency of routine examinations has varied considerably from as often as every three months to three times in the school career. The Committee consider that many routine examinations now carried out in different parts of India are unnecessary and recommend that the routine examinations of a child should take place; (a) on entry into a primary school at approximately its 6th year, (b) at the 11th year and (c) the 14th year. For children in high schools when leaving at the age of 17 a final examination is desirable. Children who go from a private school where they have not been under a medical inspection scheme to a secondary school should be given a routine examination as soon as possible after admission.

The Committee realise that, with the routine inspections in a child's school career limited to three, responsibility is thrown on the parent and the teacher for bringing the defects in a child to the notice of the doctor in the period intervening between these examinations.

Rate at which routine examinations can be carried out.

The Committee had before them figures showing the number of routine examinations which are carried out in different parts of India in relation to the fulltime staff employed. These figures varied somewhat and the consensus of opinion of the Committee eventually was that 28 routine examinations a day is a suitable number for a wholetime doctor who is also responsible for treatment. Taking the number of working days per annum in schools at 175, twenty-eight inspections per day will give a total of approximately 5,000 inspections in the year to be performed by a wholetime doctor. Taking a population of primary school children of 25,000 spread over a period of five years between the ages of 6 and 11, there would each year be 5,000 entrants and 5,000 at 11 years of age for examination, making 10,000 routine examinations. In all probability a total of 10,000 re-examinations and special examinations would be required in the year for the 25,000 school population. Such examinations are likely to occupy about half the time of a corresponding number of routine examinations. The total time required for medical inspection in a scheme covering 25,000 school children would therefore correspond to that of 15,000 routine examinations. With one doctor for 5,000 examinations, three doctors are considered necessary for the school population. These calculations are however of a general nature and the number of doctors required will depend on local conditions, especially on the proportion of re-examinations and special examinations which will have to be done.

Frequency of a doctor's visit to a school.

A doctor should maintain touch with the staff and children in each school throughout the year and his return visits for special inspection should enable him to do this. It is desirable that routine inspections should be timed so as to cause a minimum of interference with the routine working of the classes.

Medical Record.

A medical record will have to be maintained for each child. The schedules used in the various Provinces for recording the results of medical inspection were placed before the Committee. The Committee consider that it would be advisable to have a standard record and a suggested schedule for the purpose is given as an appendix to this Report.

The Committee consider that it is most important for the guidance of the new head master in a secondary school that a child should bring with him from the primary school an up-to-date medical record; similarly in the case of a child going from one school to another. It is understood that in the United Provinces the transfer certificate, which a child receives on leaving one school for another, is accompanied, where medical inspection exists, by the medical record of the child. The head master of the school which the child is leaving should be made responsible for transferring this record.

In the maintenance of records, to avoid the doctor's time being taken up with clerical work, the head master should cooperate in filling the cards and he would of course be responsible for their safe custody in the school.

The Committee consider that the height and weight figures recorded at the routine examinations are not likely to prove a valuable index to a child's progress and that they will be of much greater value if height and weight are taken at regular intervals of not less than twice a year and recorded preferably in the form of graphs. This work should be done by the teacher. Any child showing material variation from the normal progress should be brought to the notice of the doctor. In view of their recommendation that routine examinations should be limited to three, the Committee desire to stress the value and importance of the regular maintenance of these height and weight records.

Qualifications of inspecting staff.

Medical inspection should only be carried out by a qualified doctor and by this the Committee imply a registered practitioner of modern scientific medicine. He will require some special training, especially in eye refraction tests and in the detection of the early signs of malnutrition and also in ear, nose and throat conditions. In view of the increasing part which physical education is playing in the life of the school child, it is considered essential that he should be well acquainted with the physiological basis of modern physical education.

Place of inspection.

Medical inspection should be carried out on the school premises during school hours. It is very desirable that if possible a parent should be present at the time of inspection. The doctor should always go through the inspection results with the head teacher and if necessary with the class teacher also before he leaves the school. In those schools which have a physical instructor it is also desirable that he should as far as possible be available during the inspection. In this way the three persons who are intimately connected with the child, *viz.*, the teacher, the parent and physical instructor will have the opportunity of hearing the doctor's view regarding the child and of obtaining any special instructions regarding the child's health.

Statement showing percentages of children found suffering from specific defects at medical examination during 1940.

Name of the Province or State.	Defective vision.	External eye conditions.	Enlarged tonsils and adenoids.	Dental caries and pyorrhoea.	Ear diseases and defects of hearing.	Enlarged spleen.	Skin diseases.	Malnutrition.
Bengal (Calcutta)	25·9	Not available.	10·7	8·7	1·0	0·6	1·6	6·9
Delhi Province	9·0	17·0	10·9	11·9	1·2	1·1	3·1	6·9
Punjab (Boys)	10·0	Not available.	26·6	Not available.	Not available.	2·4	Not available.	18·8
N.-W. F. Province*	0·9	7·0	0·9	1·1	0·6†	*Nil.*	0·3	Not available.
Madras — Entrants — Boys	0·3	3·5§	13·0	8·6‖	2·7	Not available.	8·8	13·7
Madras — Entrants — Girls	0·2	2·2§	17·3	3·4‖	0·9	Not available.	6·6	0·8
Madras — Regulars — Boys	0·6	3·7§	23·5	14·8‖	2·4	Not available.	18·0	11·0
Madras — Regulars — Girls	0·3	3·2§	21·2	36·7‖	1·4	Not available.	8·1	1·3
Baroda city	5·3	4·3	18·9	33·8	23·9	2·1	1·8	15·1
Hyderabad (City) — Boys	6·5	Not available.	11·2	15·0	5·1	0·7	6·2	10·6
Hyderabad (City) — Girls	5·8	Not available.	8·0	5·5	0·3	0·7	1·0	4·1
Ajmer-Merwara	No figures are given ; enlargement of tonsils, defective vision, trachoma and anaemia are said to be the principal defects.							
Baluchistan	No figures are given ; the principal defects are stated to be diseases of the eye, malaria, avitaminosis, tonsillitis and splenomegaly.							
United Provinces — Urban	7·5	6·6	16·4	16·1	Not available.	0·5	2·7	14·0
United Provinces — Rural	0·9	4·8	4·5	10·8	Not available.	1·5	2·3	6·0
Bihar (Boys)	13·2	0·1	11·9	4·2	Not available.	Not available.	Not available.	13·8
Orissa	7·3	5·4	10·7	11·2	Not available.	12·0	6·6‡	19·5

* The figures relate to Peshawar for the first quarter of the year July, 1939—June 1940.
†The figure includes diseases of the ear, nose and throat.
§Eye diseases. ‖Only dental caries.
‡Figures are for scabies only.

CHAPTER IV.

TREATMENT AND FOLLOW UP OF DEFECTS.

The Committee cannot emphasise too strongly that a scheme for medical inspection without provision for treatment and follow up is of little or no use.

The table facing this page shows the nature and incidence of the principal defects found at medical inspection in certain Provinces and States. While the divergencies in the figures suggest that the examinations have not been carried out on a uniform basis, the disabilities from which the school child mainly suffers appear to be enlarged tonsils and adenoids, dental caries and pyorrhoea, malnutrition and defective vision.

Since malnutrition affects a considerable percentage of children, schemes for treatment will have to include provision for supplementary nourishment for such children. Special arrangements will be necessary for the treatment of dental defects, for the enucleation of tonsils and adenoids and for the correction of the more serious defects of vision and hearing. Simple errors of refraction can be dealt with by the school doctor as can diseases of the nose and throat which do not require operation.

The table does not provide any complete picture of the extent to which children suffer from passing ailments of the eyes and skin or other short-lived departures from normal health. The season of maximum incidence of conjunctivitis, for instance, may or may not coincide with the routine inspection of the school children. The vast bulk of these temporary defects can be treated in the school. Many of them are of such a nature that they can and should be effectively treated by a careful parent with domestic remedies. At present, however, owing to the indifference and ignorance of many parents provision for treatment must be made by the school authorities in the interests of the child. The important thing is that the child should receive treatment; treatment which will not only cure the defect in the shortest time and with least interference with his school attendance, but will also aim at preventing recurrence.

Replies to the questionnaire show that not only is the provision for treatment inadequate in most areas but that the facilities available are unlikely to fulfil the requirements set out in the previous paragraph. Exceptions are the N. W. F. Province, United Provinces and Delhi where school clinics or dispensaries have been established. In the N. W. F. Province 89·3 per cent. of the 14,401 children found with defects were treated. In Bihar 59·9 per cent. of 7,086 children with defects are said to have received treatment at hospitals and dispensaries. Most provinces gave no figure from which the percentage of defective children who actually received treatment can be calculated.

Generally speaking the child in order to obtain treatment has to take his chance at the out-patient department of the general hospital or dispensary which is usually overcrowded and where his minor ailments seem a matter of small moment to the doctor overworked in dealing with serious illness. There is small chance that any attempt will be made to explain to the child or his parents the circumstances and agencies through which the defect arose and how they can be modified to prevent recurrence. There may be no time even to do more than prescribe treatment to be carried out at home by unskilled and ignorant parents, a method which experience has shown does not give successful results.

The Committee are of opinion that the solution to the problem of providing the *right kind of treatment* in urban areas lies in the establishment of school clinics. The clinic should be conveniently placed to serve a number of schools. In many towns buildings suitable for the purpose already exist, for example maternity and child welfare centres, and in organising a scheme of treatment advantage should be taken of these. Similarly in the planning of new buildings for health activities the advisability of grouping welfare centres, school clinics, etc., should be borne in mind.

The Committee consider that, whenever his duties will permit the teacher should be present at the clinic with the children to see what is being done and to receive any instructions for treatment which is to be carried out in the school in order to relieve pressure on the school clinic. Failing the establishment of special school clinics staffed by the school health service, the next best plan will be to arrange a special session for school children daily at the local hospital or dispensary. This may have to be arranged in the afternoons when the doctor has got to attend other patients in the mornings.

Whatever may be the arrangements for providing treatment by a doctor for the child, a large amount of minor elementary treatment of children can and will have to be done at the school. Much of this work in other countries is done by the school nurse, but conditions in India at present make it essential that the duty to a large extent should fall on the teacher. It is recognised that the average primary school teacher cannot be regarded as the ideal person to carry out the daily treatment of a number of minor ailments. But until the necessary number of school nurses is available this is the obvious alternative. The teacher should be told by the school doctor the type of cases he may treat and what treatment should be given and he should be made to recognise the dangers of undertaking treatment beyond his scope. Given such training, a teacher who is interested and endowed with a fair degree of commonsense can do much for the health of his pupils. He will of course require the necessary dressings and drugs.

Follow up work.

It is important to keep in mind that treatment should be directed towards the care of the child as a whole and not merely of the particular defect discovered. The susceptibility of the child to disease is largely determined by his nutrition, his personal cleanliness and the hygienic condition of his environment.

The school itself where it is insanitary or overcrowded, or where the curriculum is not in confirmity with the physiological capacity of the child, plays a large part in causing disease. In spite of this it remains true that a preponderant role is played by the home environment, and the campaign for the reduction and prevention of disease must therefore be carried into the home if any sound progress is to be achieved.

The most efficient agent for this purpose is the health visitor who is already in touch with the parents through the maternity and child welfare services. She is in the best position to win the confidence of the mother and to make her receptive to new ideas. Traditional customs and habits, particularly the observance of purdah, militate to a large extent against the attendance at medical inspection of the mother who is after all the chief determining factor in the home environment. Wherever a maternity

and child welfare service exists every effort should be made to secure the interest and cooperation of the health visitors in following up the defective school children in their homes. However, as the number of health visitors is inadequate, any large scale employment of health visitors for the work though desirable is not practicable and therefore alternative methods of influencing the parents must be tried out.

Attention has already been directed to the value of having the parents present at medical inspection to hear firsthand the doctor's advice regarding the health of the child. In the absence of the parents the teacher is once more the agent on whom the onus will fall of trying to improve home conditions. At present very few teachers even in high schools have ever been inside the homes of the pupils. The lack of contact in every type of school between teachers and parents is a regrettable feature of school life in India which the Committee feel should be remedied as soon as possible. Teachers ought to realise that it is their duty to know the parents of their pupils and to become welcome friends in the homes of the children.

The Committee recognise that it is difficult to create any real interest in many teachers for the welfare of the children so long as their status, salaries and prospects remain at their present low levels. Even under existing circumstances a good deal can be done to secure increased assistance from teachers, but the desired end can only be achieved when the condition of service of all teachers are such as to command their allegiance and cooperation. As the teacher is the solution to so many of the problems of school health, the Committee urge the vital importance of removing the sources of discontent and of making the conditions of employment more attractive to the right type of man and woman.

CHAPTER V.

NUTRITION.

In the majority of the Provinces and States schemes for supplementing the nutrition of school children are stated to be in force, although their working in many cases is restricted to particular types of schools and to certain localities. Further evidence of the recognition by provincial authorities of the value of a midday meal for the school children is available from the fact that in certain Provinces, of the total budget allotment for the school health service a high proportion is for school meals. Examples are Madras city with a provision of Rs. 67,000 for supplementary food and an allotment of Rs. 12,000 for the school medical staff, and Bengal with a provision of Rs. 45,000 for food and Rs. 7,800 for medical inspection and treatment.

Certain details of the Bengal scheme were described to the Committee. The scheme has been in operation since 1934 by which a midday meal is given to the children of all aided high schools at a cost of four annas a month per child. This meal, although it is not substantial, is stated to have a marked effect in improving the working capacity of the children in the afternoons. In the initial stages the cost of the scheme was borne on half and half basis by Government and the parents. The scheme is now more extensively adopted and the division of cost is as follows:—

Parents where they can afford to do so pay the whole 4 annas per month. The headmaster is allowed to give free tiffin to 10 per cent. of the poorest children and the cost of this 10 per cent. is defrayed from the Government grant.

The small amount of four annas per child per month fully covers the cost of the food and its preparation in the school.

The Central Advisory Board of Health in appointing this Committee drew particular attention to the problem of nutrition in primary school children. The replies from the Provinces and States show that the children of primary schools are not generally included in the schemes for midday meals. One reason for this is that the primary school population is much larger and that the financial problem of providing supplementary food for them is therefore more difficult. The Committee were informed that in Bengal there were five million primary school children and that the cost of giving them supplementary food would be about Rs. 1½ crores. On the other hand, the effects of malnutrition on primary school children are not less serious than on children of higher ages.

In many parts of India it is the custom for children to have a meal before they leave for school and have no more food until they return home in the late afternoon. Such children cannot be expected to have the necessary energy to devote themselves to their school tasks. It is essential, both from the point of view of education and of health, that all the children should be given a midday meal, whether it is brought by the children from their homes or provided at the school by the authorities. Where food is provided by the authorities, parents who are able to pay should contribute their share to the cost of the scheme and in the case of children whose parents are too poor to pay no charge should be made. There is increasing recognition of the necessity for extending the facilities for primary education and for making it compulsory as far as possible but it is not sufficiently recognised that much of the value of such education will be lost if the child is not adequately nourished.

The main problem therefore is that of providing a satisfactory school meal at as low a cost as possible. No uniform scheme can be devised to meet the requirements of all. Various methods must be attempted for securing for the children of different economic levels some extra nourishment, and suggestions in this connection are now put forward.

The value of milk in promoting the growth of children and increasing their general sense of well-being has been definitely proved by large scale experiments in India and abroad. But whole milk is too costly an article of food to be widely used in this country. Researches by the Nutrition Research Laboratories, Coonoor, show that skimmed milk possesses considerable food value. It has now been made easily available for educational institutions by the removal of the import duty on it. Even so this food may be beyond the reach of poor primary schools.

Other experiments carried out by the Coonoor Laboratories have shown that much of the value of whole and skimmed milk is contained in calcium lactate, an important constituent of both. The administration of one gramme of calcium lactate per day has been shown to be of definite benefit to the child and costs only about one anna per child per month. Calcium lactate should therefore be within the reach of a wide section of the population.

Germinating grain has been found to be of considerable value in warding off food deficiency diseases and is a very desirable supplementary food for children. Germinating grain can be prepared easily and costs little.

Much more might be done to develop school gardens which could provide vegetables to supplement the children's midday meal. The lack of vegetables is a common deficiency in Indian diets and the development of school gardens in addition to providing nourishment for the children will have a desirable educative influence.

The Committee desire to draw the attention of health and education authorities in the Provinces to these facts, in the hope that use will be made of them in improving the nutrition of the school population.

The teacher can and should play an important part in teaching the principles of nutrition to school children and in educating the parents with regard to the methods of improving the diet of the children within the means available to them. Sound instruction of the teachers and children in nutrition requires that simple text-books embodying the fundamental principles of the subject should be made available in the different Indian languages. The Committee were informed that the preparation of such a text-book is engaging the attention of the Nutrition Advisory Committee of the Indian Research Fund Association. This text-book, when published, and the Health Bulletin entitled "The Nutritive Value of Indian Foods and the Planning of Satisfactory Diets", should be translated by Provincial Governments into the principal Indian languages and made available to the school authorities.

CHAPTER VI.

PERSONAL AND ENVIRONMENTAL HYGIENE.

The practice of personal hygiene by the school children depends on many factors, not the least important being the example set by the teacher. Not only must the teacher's personal cleanliness be of a high standard but his physique and general health must also be good. To ensure this no teacher should be appointed without passing a medical examination of fitness approved by the Government of the Province or State.

Considerable hardship may result from the application of this recommendation unless at the same time a medical examination of all candidates for admission to training schools and colleges is instituted and the Committee therefore recommend that this should be done. At an earlier stage the school doctor and the teacher can do much to discourage pupils of poor physique or handicapped by special defects from choosing teaching as a profession.

During training and on subsequent employment it is no less important that a careful watch should be kept on the teacher's health. Periodical examinations of the teacher by the school doctor should present no serious difficulty. The object is as much to protect the teacher's own health as to eliminate any danger to the school population. If the medical examination brings to light any disease or defect every effort must be made to help the teacher to a complete recovery. Treatment may not be the only means necessary, the conditions of work and the amenities provided for the teacher's comfort also deserve attention.

The teaching and practice of personal hygiene in school are dealt with in a subsequent chapter and it is only necessary here to draw attention to the need for encouraging personal cleanliness amongst the school children and for providing the facilities required for the attainment of a high degree of personal cleanliness.

In a number of Provinces and States cleanliness parades are held by the teacher. In some schools the parades take place daily, in others weekly or biweekly, in others a cleanliness parade is held only at the time of the school doctor's visit. Parade inspection is most suitable for the younger classes. A daily parade of the school children before the school starts gives the teacher an opportunity of judging the cleanliness standards of the children and of supervising the practice of cleanliness. The scope of the parade should not, however, be limited to an inspection of cleanliness; minor ailments, fatigue, malnutrition and other departures from health can and should be detected and suitable advice given or treatment initiated when necessary.

The detection of dirty children has no value unless arrangements are made for remedying the conditions. Facilities for washing are particularly important and in towns with a pipe water supply this should present no difficulty. In rural areas the construction of a soakpit and the supply of water of reasonable purity are the minimum requirements. In areas where facilities for bathing are limited school baths are an invaluable asset to any scheme for promoting the health of the school child.

The beneficial results of membership of the Junior Red Cross on the personal hygiene of the pupils is mentioned elsewhere in the report.

The question of environmental hygiene was not extensively discussed since the School Buildings Committee appointed by the Central Advisory Board of Education are already dealing with this subject.

The replies received from Provinces and States to the questionnaire state that, generally speaking, the lighting, ventilation and construction of Government schools are satisfactory. On the other hand, schools under private management are often housed in buildings not originally designed for the use of schools and fall short of reasonable hygienic standards. The selection of a house for use as a school is frequently left to a Sub-Inspector of the Education Department who usually takes no account of the health requirements. Where it is necessary to use ordinary buildings as schools the responsible education authorities should obtain the advice of the local health officer as to their suitability.

Little scientific data on the lighting, ventilation and heating of schools are available with regard to tropical conditions. The School Buildings Committee of the Central Advisory Board of Education have recommended the appointment of a body of experts to investigate and report on suitable standards for Indian conditions. This recommendation is supported.

The necessity for providing a safe water supply in schools requires special emphasis. The Committee recommend that, whatever the source of supply, there should be provided in each school some type of container in which wholesome water, kept under lock and key, is made available to the children by being drawn off through a tap.

As regards the provision of latrines the Committee are of opinion that, for schools in rural and suburban areas, the bored-hole type of latrine offers a satisfactory solution in most areas. It is cheap to construct, costs practically nothing to maintain and should prove satisfactory in every way for preventing soil pollution in and around the school premises. The possibility of surface wells becoming polluted by infection travelling through the subsoil water from bored-hole latrines has been used as an argument against the wider use of this type of latrine. This danger seems to have been exaggerated. If preliminary investigations are made to determine the direction of the flow of subsoil water the location of bored-hole latrines can be decided on with safety.

The questionnaire asked for information on the extent to which suitable school furniture is provided but the details given were scanty. In India desks are in use in the higher classes but the children of primary schools are often made to sit on the floor with no support for the back. The effect of posture on the child's health and growth, with special reference to the use of desks and seats, is a matter of great importance and requires special investigation by an expert body. The Committee consider that, without such an investigation, it is not possible to assess the ill-effects, if any, that the habit of squatting on the floor is producing on the health of primary school children.

The attention now devoted by school authorities to environmental hygiene is not sufficient. The Committee therefore consider that all officers inspecting schools, whether they belong to the Education, Medical or Public Health Departments, should report on the sanitary condition of the premises and the surroundings and bring to the notice of the education authorities such defects as they discover.

But no permanent improvement of the environment can be expected until the school children and their teachers begin to take an active interest in keeping the school premises clean. Cooperative effort among the children for the cleaning up of the school and its surrounding areas should be encouraged. The children can also take part in other forms of communal health activity. Recent work in the rural area around Delhi has shown that one of the most useful methods of preventing malaria is by the use of insecticides to kill adult mosquitoes in houses. The children in these Delhi areas have been trained to do this work. In India malaria is the most important health problem and has a crippling effect on the lives of an enormous number of school children in the areas where the disease is prevalent. The control of the disease by the eradication of mosquito breeding places is often too costly, as it involves expensive engineering works, but in the destruction of adult mosquitoes with insecticides an effective method has become available for reducing the infection of school children. The method is not expensive and, it is hoped, will become cheaper. A progressive teacher can encourage the children to help in the filling or draining of shallow depressions where water collects and the malaria mosquito breeds. These are simple measures which require only the initiative and inspiration of the teacher for their success. A passive attitude regarding the prevalence of malaria has been allowed to continue too long.

CHAPTER VII.

TEACHING OF HYGIENE IN SCHOOLS AND IN TRAINING SCHOOLS AND COLLEGES.

Replies to the questionnaire show that on paper at least the importance of training the teacher and the children in a healthy way of life is realised by the Education authorities since hygiene is included in the syllabus of every Training College and nearly every Training School in the Provinces and States from which replies were received. Similarly with one or two exceptions hygiene is stated to be a subject of study in all primary and secondary schools. In the latter hygiene is not infrequently an optional subject. This seems reasonable in the senior classes if hygiene has been well taught at an earlier stage in the school curriculum.

While the general situation on paper sounds satisfactory the low standards of personal and environmental hygiene met with in many schools are such as to forbid an easy acceptance that all is well. These low standards lead to the conclusion that something is wrong with the content of the syllabuses and the methods of teaching hygiene both in training institutions for teachers and in schools for children.

Put shortly, the successful inculcation of healthy habits in school children will depend primarily on the standards set by the teacher in his personal hygiene and on his knowledge of and outlook on health questions. The teacher must be the model to be followed by the child with regard to health and healthy ways of life. If any progress is to be made, the health consciousness of the teacher must be stimulated by better teaching of hygiene in the training schools and colleges.

As a first step towards securing the fitness of the teacher for the teaching of hygiene, the Committee wish to affirm their view that practical hygiene should be a compulsory subject in all courses for the training of teachers, and that particular attention should be paid to the subject in training schools for teachers, in primary and vernacular schools.

The syllabus in use in many of the training schools and colleges requires revision, if the new demands which will be made on the knowledge and resourcefulness of the teacher as a part of the school medical service, are to be met. In only one or two Provinces has an effort been made to prepare and publish a text-book on hygiene in the vernacular for use in training schools. In training colleges the text-books prescribed are those in use in the United Kingdom. As the personal, communal and environmental aspects of hygiene in India differ widely from those obtaining in a temperate climate text-books dealing with Indian conditions are indispensable. Apart from text-books, a handbook on health education for use by school teachers would be a valuable addition to the equipment of the teacher.

Replies to the question "Is hygiene included in refresher courses for teachers" were in the negative in the majority of Provinces and States. In order to ensure that the knowledge and interest of teachers in the subject are kept alive and in order to keep them acquainted with new developments, the attention of educational authorities is drawn to the great desirability of providing facilities for refresher courses in the subject.

The Provincial educational and health authorities should collaborate in drawing up a syllabus for each type of training institution. The preparation and publication of text-books for use in training colleges and schools

and of handbooks for the guidance of teachers responsible for health education are a necessary corollary to the revision of the syllabuses.

In the recommendations of the Committee regarding the organisation of medical inspection the teacher is called upon to play a very important part. On account of the ignorance of parents and the limited number of doctors it will largely fall on the teacher to detect early departures from normal in a child, to assist in treatment, to make contact with the home in order to influence the parents and to keep the teaching and practice of hygiene alive in the school. For these reasons the Committee consider that practical demonstrations should form an important part of the course of training. The teacher should be taught by practice how to recognise defects in children and to do elementary treatment as it is only by his learning to do so that it will be possible to establish a school medical service on a reasonably wide scale.

Certain parts of the training course will require to be taught, if possible, by a doctor, preferably by a member of the regular school medical service, the establishment of which is recommended by this Committee.

In regard to the teaching of hygiene to children the instruction now given in primary schools in several Provinces is inappropriate to the age of the child. The training of the child in health habits does not begin sufficiently early and the approach to the subject is through disease rather than through a study of the requirements for health. The Committee consider that instruction in hygiene should begin at the earliest age possible. At the beginning the instruction should be wholly on practical lines and devoted mainly to personal hygiene, while at a later age the child's interest can be directed to environmental hygiene and the health of the community. The Committee wish to emphasise that unless greater attention is given by the responsible authorities to the planning of school buildings and to the provision of equipment which will make the practice of healthy habits possible, progress will be difficult. It is futile to try to awaken in the child an interest in and a sense of responsibility for his own health and for the sanitary condition of his surroundings so long as the schools themselves fall short of reasonable hygienic standards. As the teacher should be the model for the child to follow in personal standards, the school should be the model for the home in regard to environmental cleanliness.

The replies from the Provinces show that the active and willing co-operation of the children in health matters is best secured in schools where a movement such as the Junior Red Cross is alive. In such schools, it is stated, a notable improvement has been made in the personal cleanliness and healthy habits of the children. The Committee are of opinion that the Junior Red Cross Health Game is an appropriate and valuable means of laying the foundations of a healthy life during the primary school years. At a later stage with fuller instruction in hygiene, and particularly in the environmental aspects of the subject, the child should become an asset to the school authorities for the care and orderliness of the school buildings and compound. Later his activities can be extended beyond the school boundaries to the community where he can take part in antimalaria campaigns and other measures for the control of disease and for a general raising of the standard of life in the community. In the senior classes the children can also assist the teacher in the recording of heights and weights and in the treatment of minor ailments under the direct supervision

of the teacher. In this connection the Mackenzie school course of First Aid, Home Nursing and Sanitation should prove to be of great value to the pupils.

For girls in the upper classes a training in mother-craft should prove invaluable and in order to make the training practical they should be given opportunities of visiting child welfare centres as far as this is feasible.

CHAPTER VIII.

PHYSICAL EDUCATION.

The information received from the Provinces and States shows that in a general way physical education has received more attention in secondary than in primary schools. The physical education of girls has received much less attention than that of boys.

The employment of trained physical instructors is practically limited to secondary schools, while in primary schools the teaching of the subject is entrusted to ordinary teachers who may or may not have had training in physical education.

Colleges for physical training exist in Madras, Bombay Hyderabad, Calcutta, Lucknow and Lahore. In many of the other places, facilities for physical training are provided in the training schools for primary and secondary school teachers.

The time devoted to formal physical exercises is usually part of the school hours while games are played after school has finished. The period set apart for physical exercises varies in the Provinces and States, from about 20 minutes each day to two periods of 30—45 minutes per week.

The types of physical exercises adopted in schools include games, gymnastics, drill, boxing and indigenous types of recreation such as folk dances. The Committee were informed that a lot of old fashioned drill goes on in schools which obviously does the children no good; far from benefitting them, it merely tires them. Many schools have physical drill at the end of the day, a time which should be avoided, if possible.

Physical education is everywhere stated to be compulsory for boys in secondary schools. An important question in this connection is that of ensuring that the nature and extent of the exercises that individual children are made to take do not go beyond their physiological capacity. The questionnaire asked whether the school doctor prescribed the type and extent of physical exercise to be taken by pupils suffering from physical disabilities and what other provision existed for this purpose in schools without a doctor. The replies state that where the services of a school doctor are available, his advice is followed; otherwise the physical instructor, the headmaster or the class teacher determines the class of exercise.

The Committee having considered the information available regarding the existing provisions in the country for the physical education of school children make the following recommendations:

ORGANISATION FOR THE SUPERVISION OF PHYSICAL EDUCATION.

In each Province and State, the Educational Department should have at headquarters an experienced and well qualified officer to organise the scheme for physical instruction in the colleges and schools. Under him there should be a District Inspector of Physical Education for each district. In every secondary school a fully trained physical instructor should be on the staff and the appointment of such an instructor should be a condition for a grant-in-aid. The number of primary schools is so large that the provision of wholetime trained instructors in all such schools is not practicable. However, the necessity for some skilled supervision of

physical exercises in elementary schools is urgent. District Inspectors of physical education should therefore organise training camps, lasting for about a month, for primary school teachers. The neglect of physical education for school girls up to now should be remembered when a Provincial scheme is being drawn up, and a special effort should be made to accelerate the rate of progress of physical education in girls' schools.

Physical Instructors.

Physical education is intended to assist in promoting normal physiological development and to correct physical defects in so far as they can be remedied by such training. The physical instructor should therefore have had training in the elementary principles of physiology, of the hygienic mode of life and of nutrition. He should be trained to detect early signs of fatigue in the child and to regulate (under the guidance of a doctor in certain cases) the nature and amount of exercise for individual pupils. The Committee have, earlier in this report, drawn attention to the desirability of the physical instructor being present during the medical examination of the children. He should be allowed a period or periods within the time-table when he can give remedial exercises in cases recommended by the school medical officer.

The physical instructor should also help the child to become socially minded. Participation in games, especially team games, teaches the child to subordinate his desire for personal success to the interest of the team as a whole. It has been stated that an efficient system of physical education "should encourage the concurrent development of a healthy physique, alert intelligence and sound character"*. Participation by the children in games and in the varied corporate activities of the school, such as the Scout and Junior Red Cross movements, is essential for the attainment of these objects. The physical instructor who is concerned with providing for the child a wide and varied experience in healthful living, should therefore be fitted to guide all these activities in the school.

It will thus be seen that the training of the physical instructor will require to be of a comprehensive nature. The old concept of a drill-master or a weight lifting expert is now effete. The Committee had before them details of the training given to students in some modern colleges for physical training. Health education finds a prominent place in the programme of study, the aim being to develop in teachers the incentive and the ability to train children to practise healthful living, and to enable teachers to cooperate intelligently in medical inspection. The Committee agree with these aims and commend them to those responsible for the training of physical instructors in different parts of the country.

The Committee consider that physical instructors, when they reach the age of 40, should be absorbed into the normal teaching work. It is not uncommon to find men carrying on the duties of physical instructors at 50 and 55 years of age. This is undesirable. To prevent this, physical training instructors should also be qualified to teach other subjects and should be required to devote a certain amount of time to doing this throughout their career.

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*Syllabus of physical training for schools issued by the Board of Education, England and Wales, 1933.

Physical exercise.

The Committee consider that some period every day should be devoted to organised physical activity but that undue emphasis on drill is undesirable. Organised games should form an important part of the curriculum for physical education. Games should be played within the school hours since by postponing them to the end of the day, many children living at a distance are prevented from taking part. In view of the difficulty of securing playing fields in towns provision for small area games should, as far as possible, be encouraged in the schools in urban areas.

An essential part of any town-planning scheme is the provision of adequate open areas for school games.

Medical care of the children undergoing physical training.

The Committee consider that, wherever a school medical service exists, the school medical officer should note on the child's card any modification which he considers necessary regarding the child's physical education.

It is desirable that Provincial Health and Education authorities should together draw up a code on physical education and that this code should include advice on the medical aspects of this subject. The formulation of a system of graduated physical exercises to suit the requirements of different types of children is also desirable.

CHAPTER IX.

CORPORATE ACTIVITIES.

The organisations for corporate activity which usually exist in schools are the Junior Red Cross, Boy Scouts and Girl Guides, the Hindustan Scouts and the Bengal Bratachari movement. All these organisations have a common aim, to aid the evolution of healthy and socially useful citizens. A certain amount of overlapping and duplication is inevitable in the activities of organisations which have a common objective, but while the objective may be the same, the lines of approach may vary. The same methods will not necessarily appeal to every child, nor to the same child at different ages, and it is therefore advantageous to have a variety of organisations even in one school. Fortunately the interests of the teachers will not be uniform and some account must be taken of their preferences and enthusiasms. Any corporate activity under an enthusiastic teacher will secure the willing and whole-hearted support of the children. The outlook and interests of the teacher are perhaps more important in determining the value of the activity on the character of the child than the actual organisation to which the child belongs.

At the same time there are differences in the programmes of the various organisations. The value of the Junior Red Cross in developing the health consciousness of the child has already been discussed. No other organisation lays quite the same emphasis on the practice of personal hygiene, and as an auxiliary to the school health services an active Junior Red Cross group can be a great help. The activities of the Junior Red Cross should be definitely correlated as closely as possible with the general health work of the school. From the point of view of health the Committee recognise the value of the Junior Red Cross and recommend that the Education Department should be strongly represented on the Provincial Junior Red Cross Committees in order that the potential benefits of this important movement may become more widespread throughout the schools in India. Other organisations which emphasise physical fitness, social service, nature study, crafts, camp life and other forms of healthful activity are equally important. The overlapping of activities can be in a large measure avoided by selecting the best features of each movement and by concentrating the activities of the group on the selected features, while leaving the members free to join up with other groups for the complementary activities.

The Committee recommend that the curriculum of the school should be arranged to provide at least one period a week for some corporate activity in addition to physical training and organised games.

Many agencies must work together to make secure the child's right to health and happiness. But of all those agencies, the parents are the most important as theirs is the longest and strongest influence in the child's life. No scheme for the school health services can be considered complete which does not arouse in the parents an interest in and a sense of responsibility for the care of their children. The advantages of having the parents present at medical inspection have already been stressed and attention has been drawn to the need for greater opportunities for individual parents and teachers to meet both in the school and in the home, but this is not enough. A sustained campaign to interest the parents in the school activities and to increase the opportunities of contact between

the parents and the school authorities must be undertaken. Broadcasts and cinematograph films may have a place in certain areas, and school journeys or excursions can be a valuable experience alike to children and parents. Social functions such as prize distributions, school concerts, sports and parents day celebrations are another method of reaching the parents. They should be encouraged to witness and appreciate the school and community health activities and by this means their cooperation can be secured towards introducing new ideas into the homes.

The limitations that poverty imposes on what the parents can do to improve their home environment are fully recognised, but the sanitary state of the home and the environment is largely due to ignorance and traditional custom. Much can be done through education to improve existing conditions and the simultaneous education of the child and his parents is an important part of the corporate activities of the school.

CHAPTER X.

ADMINISTRATION.

Provincial and District Headquarters.

The Education, Medical and Public Health Departments in the Provinces are all intimately concerned with the successful working of the school medical service. Any scheme proposed for the administrative control of the service must take note of this fact. During discussion in committee it was urged that as the full cooperation of the teachers would be essential, the Education Department should be given the administrative control of the service. The teachers would have to be brought into the scheme very largely to assist the school medical officers, and the fullest cooperation would be secured if both the medical officer and the teacher are under the same administrative authority. The Committee felt at the same time that the school medical services in the Provinces will have to work in the closest cooperation with the existing health services, and must derive the fullest advantage from the facilities and knowledge already available in the Medical and Public Health Departments. Coordination at provincial headquarters is therefore of the greatest importance.

In view of the above considerations the Committee came to the conclusion that school medical services should be created in the Provinces and that the administrative control of these, including the necessary budget provision, should be under the Education Department. In each major Province there should be a Chief School Medical Officer to administer the school medical service which should contain a sufficient number of doctors for the administrative and executive duties of medical inspection and treatment of school children. They also consider that in order to promote coordination in regard to school medical work between the Education Department and the Medical and Public Health Departments, a coordination committee of the Director of Public Instruction, Surgeon General or Inspector General of Civil Hospitals and the Director of Public Health should be set up in majoe Provinces.

In making the recommendation for the appointment of a Chief School Medical Officer the Committee do not regard it as necessarily involving the appointment of a third administrative medical officer at Provincial Headquarters. They are of opinion that, in order to secure as much coordination as possible and to facilitate the economic use of doctors already in the employment of the Provincial Government, it may be found convenient for the Surgeon General or the Inspector General of Civil Hospitals as the case may be or the Director of Public Health to act as Chief School Medical Officer under the Minister for Education. Whether one of these officers acts as Chief School Medical Officer or a separate appointment is made is obviously a matter for each Provincial Government to decide.

Coordination of effort among the officers of the three Departments should also be extended to the districts. The District Medical Officer is in charge of medical administration while the control of public health work is divided between Municipal Health Officers, wherever they exist, and the District Health Officer who is responsible for the rural areas. It is recommended that there should be a District School Medical Officer for the

organisation and supervision of the schemes in urban and rural areas. This Officer should work in close cooperation with the District Medical Officer and the Municipal and District Health Officers.

The school medical services in individual local areas are the statutory responsibility of Municipal Committees and District Boards. In India as in England, Government control over the efficiency of local health administration is exercised through the judicious distribution of grants-in-aid to the responsible local bodies. The same principle should apply in the case of local school medical services. The Committee consider that Government's grant-in-aid should be at least 50 per cent of the cost, and that necessary safeguards should be incorporated in the conditions governing the distribution of such grants. In this way the Provincial Government will be able to ensure that only considerations of efficiency will determine the recruitment of personnel and the standard of administration to be maintained by the local authority.

The expenditure on the supervising staff maintained at Provincial and District headquarters should be a charge on the Provincial funds. A Provincial cadre of school Medical Officers will attract suitable men to the service. They should be capable of directing the work in the local areas both from the administrative and technical points of view and will therefore require special qualifications and experience. Some doctors after a period of service in school medical work may desire to take up some other branch of medicine. This situation might be met by the deputation to the school medical service of officers from the Medical and Public Health Departments, and it will be an early task of the Coordination Committee at Provincial Headquarters to formulate a practical scheme for the appointment and deputation of such officers. Continuity in the school medical work is however vital and the period of deputation of a doctor for this work should be at least four to five years.

Urban Schemes.

The provision of medical facilities, the number of school children, the proportion of well-to-do parents and the facilities for transport vary widely among urban areas. It is therefore useful to divide these areas into two broad groups, one including the cities and large towns and the other the remaining urban centres of population. In regard to the first it has already been pointed out that the available resources may, in many cases, be such that there should be no great difficulty in attempting to develop a school health service on as broad a basis as has been done in Western countries. With respect to the latter group, a less ambitious programme is in keeping with the prevailing conditions.

In the larger towns the Committee consider that for efficient service the employment of wholetime school medical officers is essential. Such officers should not be permitted to engage in private practice. A scheme should include primary and secondary schools and it should be a condition of recognition and grant-in-aid that each school should either take advantage of the local school medical scheme or have approved medical arrangements of its own. The Committee consider that no child should be deprived of necessary treatment on account of the poverty of its parents. Medical inspection and treatment should therefore be provided free for the children

of all primary schools and of the primary departments of secondary schools Treatment should include admission to the free wards of Government hospitals and operation treatment if required. In secondary schools where fees are charged for tuition, it is reasonable that an additional fee should be levied to cover the cost of medical inspection and treatment at the school clinic.* Where no school fees are charged it is not advisable to introduce a special fee for the school medical service.

In the smaller towns it will be necessary to utilise the services of part-time doctors. They may come from Government or local body hospitals and dispensaries or may be health officers. Others may be private practitioners. The Committee realise that with a part-time doctor there may be certain difficulties. The demands of private practice on his time may make it difficult for him to devote the necessary time to his school duties. It has been stated that some part-time school doctors have utilised the contacts which school work offers to extend their private practice. Strict supervision is required to prevent such abuses. The Committee recommend that the amount paid to a part-time private practitioner should bear the same relation to the salary of a full-time officer as that between the respective number of hours spent by each on the work. The duties to be performed by part-time doctors should be carefully defined and should include inspection and treatment.

Rural Schemes.

Rural areas present more difficulties than towns and cities. The extent to which medical relief and other health services have been developed in rural areas differs widely in the provinces and sometimes in different areas in one province. In some provinces subsidised rural practitioners have been established and in some others no such service has been provided. Again the number of medical men in general practice in rural areas varies greatly.

Certain facts relating to Bengal were described to the Committee. The average population in a district is approximately two millions of which the number of school children is estimated at 200,000. No subsidised practitioner service exists in the province. As regards facilities for travel, conditions differ widely in Eastern Bengal with its water transport system and in Western Bengal which is drier and has more rapid communications.

Similar diversity of conditions may exist in other provinces and the Committee therefore came to the conclusion that before a school medical inspection scheme can be drawn up for rural areas it is necessary that a preliminary survey be made to determine the extent of the medical facilities that are available in such areas and to determine ways of supplementing them. The survey should take into account the strength of the school population in the area, the medical men employed by Government and local bodies, the number of private practitioners, the public health organisation that exists, the distribution of schools and the means of communication between the different parts of the area.

Certain possible methods of securing medical men for inspection and treatment may be mentioned. The services of doctors in charge of Government or local body dispensaries or of private practitioners may be utilised

* *In this connection please see the foot note on page 37.*

on a part-time basis. It may be necessary to employ wholetime touring medical officers to carry out medical inspection but doubt was expressed regarding the value of this class of medical officer. Adequate supervision of their work is difficult. In very extensive and sparsely populated areas the employment of such an officer cannot perhaps be avoided. As in the case of urban schemes the part-time school medical officer should be paid a proportion of the wholetime medical officer's salary corresponding to the proportion of wholetime work which he carries out.

CHAPTER XI.

SUMMARY AND RECOMMENDATIONS.

Introduction and Historical.

1. The Committee wish to draw special attention to the frequency with which a system of medical inspection has been started in a Province only to be abandoned after a short while as a measure of economy. This indicates that there has not been a clear appreciation of the fundamental necessity for and the essential characteristics of a school medical scheme. The Committee emphasise that satisfactory arrangements for school medical inspection and treatment form an essential part of any efficient system of public education. (Page 6).

Aims and objects of a School Medical Service.

2. The Committee consider that the aims and objects of a school medical service, as defined by Sir George Newman, are applicable to India and that it is absolutely essential that steps be taken to ensure that children attending school are healthy and kept healthy. This is necessary not only from the medical but also from the educational point of view. (Page 7).

3. In developing a school medical service in India a big difficulty is the inadequate number of qualified doctors and nurses. However, in some of the large cities it should be possible to organise school health work on as wide a basis as in the West. (Page 8.)

Medical Inspection.

4. Probably fifty per cent. of the children attending school would be found to require medical attention or medical observation. (Page 9.)

5. Too much weight cannot be given to health considerations in determining the age at which children should be admitted to school. The age of school entry should be not more than six and preferably five. (Page 9.)

6. Many routine examinations of school children in some parts of India are unnecessary. The routine examinations should be (a) on entry into a primary school at approximately its sixth year, (b) at the 11th year and (c) at the 14th year. For children in high schools when leaving at the age of 17 a final examination is desirable. Children going from a private school without a medical inspection scheme to a secondary school should be given a routine examination as soon as possible after admission, (Page 10.)

7. A wholetime doctor may reasonably be expected to carry out 5,000 routine inspections in a year. (Page 10.)

8. A medical record will have to be maintained for each child which will go with the child when he goes from one school to another. (Pages 10-11.)

9. Height and weight records should be taken not less than twice a year. This work should be done by the teacher. (Page 11.)

10. Medical inspection should only be carried out by a qualified doctor with special training for the work. (Page 11.)

11. Medical inspection should take place in the school during school hours and if possible the parents should be present. In schools with a

physical instructor he should as far as possible be available during the inspection. The doctor should go through the inspection results with the teacher. (Page 11.)

Treatment and Follow up.

12. A scheme for medical inspection without provision for treatment and follow up is of little or no use. Schemes for treatment must include provision for supplementary nourishment. Special arrangements will be necessary for treating dental defects, tonsils and adenoids and for correcting the more serious defects of vision and hearing. (Page 13.)

13. In urban areas accommodation for school clinics should be provided at convenient centres. In many towns, buildings suitable for the purpose already exist, such as maternity and child welfare centres. Where it is not possible to provide special school clinics the next best plan is a special session for school children at the local hospital or dispensary. (Page 14.)

14. Much of the minor elementary treatment can be done by the teacher provided he has received the requisite instruction. (Page 14)

15. Any campaign for the reduction and prevention of disease amongst school children must be carried into the home if sound progress is to be achieved. (Page 14.)

16. Every effort should be made to secure the interest and cooperation of health visitors in following up the defective school children in their homes. (Pages 14-15.)

17. The lack of contact in every type of school between teachers and parents is a regrettable feature of school life in India which the Committee feel should be remedied as soon as possible. (Page 15.)

18. As the teacher is the solution of so many of the problems of school health, the Committee urge the vital importance of making the conditions of employment more attractive to the right type of man and woman. (Page 15.)

Nutrition.

19. The children of primary schools are not generally included in the schemes for midday meals. The effects of malnutrition on primary school children are not less serious than on children of higher ages. All the children should be given a midday meal, whether it is brought from their homes or provided at the school. Parents able to pay should contribute to the scheme. (Page 16.)

20. Simple text-books embodying the fundamental principles of nutrition should be made available in the different Indian languages. (Page 17.)

Personal and Environmental Hygiene.

21. The practice of personal hygiene by the school children depends largely on the example set by the teacher. Not only must the teacher's personal cleanliness be of a high standard but his physique and general health must also be good. All candidates for admission to training colleges and schools should be medically examined. The teacher should be medically examined at intervals as much to protect his own health as to eliminate any danger to the school population. (Page 18.)

22. A daily parade before the school starts gives an opportunity of judging cleanliness standards. It should be a health and cleanliness parade. (Page 18.)

23. Where it is necessary to use ordinary buildings as schools the responsible educational authority should obtain the advice of the local health officer as to their suitability. (Page 19.)

24. The appointment of a body of experts to report on suitable standards for lighting, ventilation and heating of schools is recommended. (Page 19.)

25. In each school some type of container should be provided in which wholesome water kept under lock and key is made available. (Page 19.)

26. Regarding the provision of latrines, the bored-hole latrine offers a satisfactory solution in most rural and suburban areas. (Page 19.)

27. The effect of posture on the child's health and growth with special reference to the use of desks and seats is a matter of great importance and requires special investigation by experts. (Page 19.)

28. Cooperative effort among the children for the cleaning up of the school and its surrounding areas should be encouraged and suggestions are made for carrying this out. (Page 20.)

Teaching of hygiene in schools and in training schools and colleges.

29. Instruction of school children in hygiene should begin at the earliest age possible and at the beginning should be made wholly on practical lines and devoted mainly to personal hygiene. (Page 22.)

30. The Junior Red Cross Health Game is an appropriate and valuable means of laying the foundations of a healthy life during the primary school years. (Page 22.)

31. Hygiene should be a compulsory subject in all courses for the training of teachers. (Page 21.)

32. Practical demonstrations should form an important part of the course of training in hygiene for teachers. They should be taught by practice to recognise defects in children and to do elementary treatment. (Page 22.)

33. Text-books on hygiene dealing with Indian conditions are indispensable. (Page 21.)

Physical education.

34. The Education Department headquarters staff should include a well qualified and experienced officer to organise the scheme for physical instruction in colleges and schools. He should have an Inspector for each District. (Page 24.)

35. The physical instructor should have training in the elementary principles of physiology, of the hygienic mode of life and of nutrition. (Page 25.)

36. Health education should find a prominent place in the programme of study of the physical instructor, the aim being to develop in them the incentive and the ability to train children to practise healthful living and to enable them to cooperate intelligently in medical inspection. (Page 25.)

37. Every secondary school should have a fully trained physical instructor, and his appointment should be a condition for a grant-in-aid. (Page 24.)

38. District Inspectors should organise training camps for physical instruction, lasting about a month, for primary school teachers. (Page 25.)

39. A special effort should be made to accelerate the rate of progress of physical education in girls schools. (Page 25.)

40. Some period every day during school hours should be devoted to organised physical activity but undue emphasis on drill is undesirable. Organised games should form an important part of the curriculum for physical education. (Page 26.)

Corporate activities.

41. The Education Department should be strongly represented on the Junior Red Cross Committees in order that the potential benefit of this important movement may become more widespread throughout the schools. (Page 27.)

42. The curriculum of the school should be arranged to provide at least one period a week for some corporate activity in addition to physical training and organised games. (Page 27.)

43. A sustained campaign to interest the parents in the school activities and to increase the opportunities of contact between the parents and the school authorities must be undertaken. (Pages 27-28.)

44. Much can be done through education to improve existing health conditions, and the simultaneous education of the child and his parent is an important part of the corporate activities of the school. (Page 28.)

Administration.

45. School medical services should be created in the Provinces. (Page 29.)

46. The administrative control of these, including the necessary budget provision, should be under the Education Department. (Page 29.)

47. In each major Province there should be a Chief School Medical Officer to administer the school medical service which should contain a sufficient number of doctors for the administrative and executive duties of medical inspection and treatment of school children. (Page 29.)

48. In order to promote coordination in regard to school medical work between the Education Department and the Medical and Public Health Departments, a coordination committee of the Director of Public Instruction, Surgeon General or Inspector General of Civil Hospitals and the Director of Public Health should be set up in major Provinces. (Page 29.)

49. In making the recommendation for the appointment of a Chief School Medical Officer the Committee do not regard it as necessarily involving the appointment of a third administrative medical officer at Provincial headquarters. They are of opinion that, in order to secure as much coordination as possible and to facilitate the economic use of doctors already in the employment of the Provincial Governments, it may be found convenient for the Surgeon General or the Inspector General of

Civil Hospitals as the case may be or the Director of Public Health to act as Chief School Medical Officer under the Minister for Education. Whether one of these officers acts as Chief School Medical Officer or a separate appointment is made is obviously a matter for each Provincial Government to decide. (Page 29.)

50. Government control over the efficiency of local school medical inspection schemes should be exercised through the judicious distribution of grants-in-aid to the responsible local bodies. Government grants-in-aid should be at least 50 per cent of the cost. (Page 30.)

51. The expenditure on the supervising staff maintained at Provincial and District headquarters should be a charge on the provincial funds. (Page 30.)

52. Continuity in school medical work is vital and the period of deputation of a doctor for this work should be at least four to five years. (Page 30.)

53. In the larger towns the employment of wholetime school medical officers is essential for efficient service and such officers should not be permitted to engage in private practice. A scheme should include primary and secondary schools and it should be a condition of recognition that each school takes part in the scheme. (Page 30.)

54. Medical inspection and treatment should be provided free for the children of all primary schools and of the primary departments of secondary schools. (Page 31.)

*55. In secondary schools where fees are charged for tuition an additional fee may be levied to cover the cost of medical inspection and treatment. (Page 31.)

56. Before a school medical inspection scheme can be drawn up for rural areas a preliminary survey should be made of the medical facilities available and of the ways of supplementing them. (Page 31.)

Sd. G. G. JOLLY (*Chairman*).
,, E. COTTER.
,, W. C. PATON.
,, A. C. BANERJEA.
,, C. M. GANAPATHY.
,, JEAN M. ORKNEY.
,, J. SARGENT.
,, S. N. MOOS.
,, W. A. JENKINS.

NEW DELHI;
The 26th December 1941.

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* The Central Advisory Board of Education at its meeting held on the 14th and 15th January, 1942, in accepting the Report, suggested that this recommendation may be amended as follow :—

"*In secondary schools particularly in urban areas the fees charged should include a contribution towards the cost of medical inspection and treatment.*"

This amendment was accepted by the Central Advisory Board of Health when adopting the Report at its meeting held on the 26th, 27th and 28th January, 1942.


सत्यमेव जयते

APPENDIX.

SCHEDULE FOR MEDICAL INSPECTION.

Name of Education Authority. *Primary and Secondary Education.*

I. Name of School.....District.....town/village.....

Name of the pupil.....Name and address of parent or guardian.....

Date of birth..... 1

	Year.	Year.	Year.	Year.
II. Personal history—				
Measles				
Whooping cough				
Diphtheria				
Chickenpox				
Vaccination and date				
Malaria				
Smallpox				
Typhoid				
Dysentery				
Other diseases 2				
Family medical history (if exceptional) . .				
III Height 3				
Weight 3				
Age 4				
Standard				
Regularity of attendance				
Mental capacity 5				
Vision 6				
Hearing 7				

	1st routine examination.	2nd routine examination.	3rd routine examination.	4th routine examination.
IV. Date of M. I. Initials of M. O. . . .				
Parents present—				
General conditions—				
Nutrition 8				
Clothing 9				
Footwear 9				
Cleanliness, body, hair and scalp . 10				
Chest measurement 11				

	1st routine examination.	2nd routine examination.	3rd routine examination.	4th routine examination.
Special Conditions—				
External eye diseas 12				
Vision 13				
Speech 14				
Teeth and gums 15				
Ear disease 16				
Hearing 17				
Skin disease 18				
Nose or throat 19				
Tonsils 20				
Adenoids				
Glands, cervical and general . . .				
Mental condition . . . 21				
Disease or deformity—				
Heart 22				
Anaemia 23				
Lungs				
Nervous system 24				
Digestive system 25				
Liver 26				
Spleen 27				
Tuberculosis 28				
Rickets 29				
Deformities (posture) . . . 30				
Acute infectious diseases				
Other diseases or defects . . . 31				

The numbers relate to the attached notes.

V. Notification card 32

Date of issue . . . . . .

Date of return . . . . . .

VI. Doctor's observations 33

VII. Teacher's observations . . . 34

Special inspections and re-inspections . 35

Date..... Notes .....Place, duration and result of treatment.

NOTES ON THE SCHEDULE FOR MEDICAL INSPECTION.

It is suggested that the schedules for boys and girls should be of different colours or should be coloured differently at one of the four corners. The schedule makes provision for the four routine examinations a child is likely to undergo during his or her school career, namely, at approximately the 6th, 11th, 14th and 17th year of age.

Sections I, II, III and VII are to be filled in by the school teacher prior to medical inspection. Sections IV, V, and VI are to be filled in by the school doctor.

1. To be stated exactly, date of month and year.

2. Should include any other illness likely to have an effect direct or indirect on the health of the child in after life, *e.g.*, rheumatism, tonsillitis, tuberculosis, syphilis, fits, operations, etc.

3. Height and weight should be recorded by the teacher at least twice yearly and preferably once every term and the record should be available at the time of medical inspection.

4. To be stated in years and months, *e.g.*, 11 2/12.

5. State the approximate number of years the child is educationally behind the average of the class.

6. To be tested as in Note 13. Failing this method the teacher should record as normal or defective on the presence or absence of such signs as headache, holding the book close, inability to see the blackboard etc.

7. Record as normal or defective. Note the child's attitude during class, the repetition required during dictation lesson or when commands are given, etc.

8. Classify as good, normal, subnormal, poor. The alertness, vigour and expression of the child, the appearance of the skin and hair, the redness or pallor of the mucous membranes should be taken into consideration in determining the nutrition.

9. Note insufficiency, need of repair, cleanliness (good, average, bad) presence or absence of footwear.

10. Note the cleanliness of body and head separately as clean, slightly dirty, dirty, scurf, nits, vermin and sores as well as skin disease should be looked for; sores and skin diseases being noted under "Special Conditions, skin diseases."

11. The chest measurement should be taken at the level of the junction of the 4th costal cartilege and the sternum and should be recorded at full inspiration and expiration.

12. Including blepharitis, styes, conjunctivitis, trachoma, diseases of the cornea or lens, squints, nystagmus, etc.

13. To be tested by Snellen's Test Types at 6 metres (20 ft.) and recorded for each eye separately thus R. 6/6 and 6/12. Children under 6 years need not be tested by Snellen's types.

14. Including defects of articulation, *e.g.*, stammering, lisping, etc.

15. Note pyorrhoea, abscesses, number of carious teeth, cleanliness special features, *e.g.*, irregularity, Hutchinson's teeth, etc.

16. Including otorrhoea, wax etc.

17. Each ear to be tested separately by the forced whisper method. Numbers should be whispered and the child should be asked to repeat the numbers.

18. Includes contagious diseases, *e.g.*, ringworm, scabies, etc.

19. Note mouth breathing, nasal catarrh, deflected septum, enlarged turbinates, polypi, malformations of palate etc.

20. Record as N. (normal + (slight enlargement) + + (moderate and severe enlargement) and for each tonsil separately, *e.g.*, R + / L + +.

21. Note as bright, average, dull, backward, mentally defective.

22. Functional or organic disease.

23. Normal (N): slight + severe + +.

24. Including paralysis, epilepsy, emotional or social instability.

25. Note indigestion, anorexia, diarrhoea, constipation etc.

26. Note in inches below costal margin.

27. (1) State whether the spleen is palpable or not.

(2) If the spleen is palpable, ascertain the position of the costal margin and feeling gently below it, ascertain whether the spleen is projecting below the costal margin. If it does, outline with a grease pencil that portion of the edge of the spleen which projects most freely (the 'apex' of the spleen) while the child is standing in a perfectly natural position, equally on both feet, and looking directly to his front. Using this mark as a guide measure in centimeters the distance between the apex mark and the costal margin. Record this as the size of the enlarged spleen for the child.

(3) To find the 'average enlarged spleen' of a group of children take the sum of these measurements and divide the sum by the number of children in whom splenic enlargement is recorded.

28. Glandular, osseous, pulmonary, or other forms and whether definite or suspected.

29. Note particular form of rickets, knock-knee, spinal curvature, etc.

30. Including deformities of the head, trunk, limbs, spinal curvature, bone disease, deformed chest, shortened limbs, club foot etc.

31. Any weakness or defect not noted above, *e.g.*, hernia, which may unfit a child for ordinary school routine including physical exercise.

Catamenia may be added to the schedule for girls schools, if desired.

32. The notification card will be issued by the doctor through the teacher to the parents; the counterfoil should be returned to the teacher who will attach it to the schedule and enter the date of return of the counterfoil.

33. Includes a general summing up of the child's health and any peculiarities which may want watching. Includes also any special advice given to the parent or to the teacher regarding modification of school work, exercise, etc.

34. The teacher's remarks should include a general survey of the child's health including his special disabilities.

35. Special inspections should be entered in red ink. The findings at reinspection and any notes of illnesses treated by the family doctor, dispensary, hospital or at a school clinic or in school together with the dates of commencement and completion of the treatment should be entered in black ink.

The follow up of children with defects will be facilitated if a code is used to signify whether the child requires observation or treatment and nature of the treatment advised. Blue pencil may be used to mark the former class of defect for which treatment is unnecessary, but which must be kept under observation in case of unfavourable developments. For example if the child is suffering from slight enlargement of the tonsils which are causing no symptoms the symbol 'R.I.' (re-inspection) may be placed in blue pencil after the defect. Similarly a child wearing glasses for defective vision may need no immediate treatment but should be seen periodically and therefore marked with a blue 'R.I.' Red pencil may be used to mark defects requiring treatment and a red symbol used to indicate the nature of the treatment advised. For example, a red 'C.L.' may signify that the child has been advised to attend the school clinic, a red 'H' that the child has been referred to hospital or dispensary, and a red 'D' that he has been referred to a private practitioner. A circle round the symbol, *e.g.*, R.I. or H. may be used to indicate that a follow up visit to the home is desirable in order to explain to the parents the causes of the disability and the steps to be taken to ameliorate or cure the defect. All cards marked in red or blue pencil will be seen by the doctor at the time of his visit.

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