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*Cumberland County Council.*

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*EDUCATION COMMITTEE.*

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# *REPORT*

*OF THE*

*SCHOOL MEDICAL OFFICER*

*F. H. MORISON, M.D., D.P.H., &c.,*

*ON THE*

*Medical Inspection of  
School Children.*

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*FOR THE YEAR ENDED .*

*DECEMBER 31st, 1920.*

For instance, uncleanness of the head must be dealt with drastically, because it often leads to enlarged glands, which are very apt to become tuberculous, again uncleanness leads to irritation and scratching by which means septic matter is removed from the head and transferred to the eyes, causing blepharitis or conjunctivitis with their attendant evils.

Squint should be attended to at once. We cannot, with present day knowledge, be satisfied with the statement that the child will "grow out of it," although the statement has a certain amount of truth in it; the child in many cases does grow out of it, but in the large majority of cases at the expense of the sight of the one-time squinting eye.

It is difficult to say what are the ultimate effects of bad teeth, of which so little notice is taken, sufficient is, however, known of the disastrous effects they have on health to make it necessary that even one bad tooth should receive immediate attention.

The co-operation of parents will have to be much more freely given than it is at the present time; many parents object to treatment even when the symptoms of disease are well marked, and after the results of neglect to have treatment have been carefully pointed out to them.

I have the honour to be,

Yours obediently,

F. H. MORISON,

*School Medical Officer.*

CARLISLE,  
May, 1921.

I.—*STAFF.*

As described in my last report, the County, for purposes of Medical Inspection, is divided into five areas, with a Medical Officer in charge of each :—

No. 1 Medical Area	..Dr. A. C. B. McMurtrie.
No. 2 Do.	..Dr. J. M. Gibson.
No. 3 Do.	..Dr. M. Manson.
No. 4 Do.	..Dr. D. C. Adam.
No. 5 (part-time) Do.	..Dr. C. A. Mason.

The staff, however, was not complete during the whole year.

Dr. Mr. Murtrie commenced duty on	19th February.
Dr. Gibson	do. 16th January.
Dr. Manson	do. 19th January.
Dr. Adam	do. 1st June.
Dr. Mason	do. 1st September.

Ten whole-time Nurses are employed, their times being divided between School work, health visiting, and tuberculosis work.

The services of 60 District Nurses are utilised by arrangement with Nursing Associations.

II.—*CO-ORDINATION.*

As the whole of the Staff, both Medical and Nursing, is engaged not only in School work but also in all the other health services, co-ordination of the work is simple and complete.

- (a) Infant and child welfare work is carried out in the same centres and by the same staff as the School work, and the County Council is the Authority for the Administration of the Notification of Births Act for the whole County, with the exception of one Urban district. Information regarding the Notification of Births is handed on to the Attendance Department, so that in years to come that department will have a complete record of all children who should be attending School.
- (b) There are no Nursery Schools in the County, nor does there appear to be any need for them.
- (c) Debilitated children under School age are sought for, and looked after by the Nursing Staff, and any requiring medical treatment, who cannot attend at one of the treatment centres, and whose parents cannot afford to pay medical fees are sent to a medical practitioner whose fees are paid by the County Council, a scale of fees having been arranged for this.

### III.—THE SCHOOL MEDICAL SERVICE IN RELATION TO PUBLIC ELEMENTARY SCHOOLS.

On the occasion of the Medical Inspection, the School premises are always inspected by the Medical Officer, and reports are sent to the School Medical Officer, who, when necessary, reports to the Buildings Committee.

It is, however, recognised that the present is not an opportune time to make any but the most necessary improvements, and so only the most serious and pressing defects have been pointed out.

These include defects in lighting, heating, ventilation, cloakroom accommodation, and sanitary conveniences.

The playgrounds of many Schools leave much to be desired, but to tar-pave or asphalt them at the present time is out of the question, owing to the almost prohibitive cost.

The Buildings Committee has given much time and thought to these matters, and it is only the stringency of the times that prevents all the necessary improvements being carried out.

Many of the most urgent matters reported on have received attention during the year.

There are many conditions to account for the unsatisfactory state of many of the Schools, such as faulty construction in the first instance, age and dilapidated condition, when taken over by the Education Authority, and in many cases lack of interest in and attention to the condition of the Schools on the part of the Managers.

It is true that in many Schools the sanitary conditions, cloakroom accommodation, heating and ventilation arrangements, are far from perfect, but the best is not in all cases made of existing conditions. Complaints are made from all parts of the County where midden privies exist that they are not emptied often enough, and the same applies, but in a less degree, to pail closets.

In his report on No. 2 area, Dr. Gibson on this point says :—  
“ The insanitary conditions which obtain at many of the School buildings call for attention. . . . at practically all the Rural Schools the types of sanitary conveniences provided, and the attention they receive, leave much to be desired. Usually one finds a latrine of the old midden type, with seats which are seldom scrubbed, and often devoid of lids, thus giving free access to flies, whilst the number of times per year in which they are cleaned out would never reach two figures . . . of course, sanitation is not such an easy matter in the country as in the towns

where one finds the water-carriage system; but a pail system is quite satisfactory provided it is supported by good drainage, an impervious floor which can be easily cleaned, fly-proof seats with lids, daily washing of the seats and lids, and emptying of the pails twice a week."

Dr. Gibson goes on to say, and this, in my opinion, is a statement well worthy of careful consideration by all those in any way responsible for our Schools:—"From an educational point of view alone the sanitary arrangements at a School should be as near to perfection as it is possible to make them, not only so, but the children should be taught the necessity for this. They should be taught something about the house-fly, of its habits, and of its dangers to health, and cleanliness should be rigidly insisted upon. The impression made on a child is a lasting one, and it is only by allowing children to grow up amid sanitary conditions at the Schools that they can ever fully appreciate the importance of sanitation."

The necessity for the abolition of such conditions as exist is now, I think, generally recognised, and I hope before long there will not be the same necessity to offer such adverse criticisms.

#### IV.—MEDICAL INSPECTION.

A very full description of the arrangements made for, and the method of carrying out the Medical Inspection was given in my Annual Report for 1913, except that methods have improved in details and arrangements been completed, no change has taken place. (See Appendix A., Annual Report, 1913).

(a) *Age groups of children inspected.* The groups of children to be examined fall under three headings:—

Code Groups, Specials, Re-examinations.

- (1) The Board of Education requires the examination of three groups of children, Entrants, Intermediates and Leavers. These have conveniently come to be recognised as "Code" groups.

Entrants are children under seven years of age, who have not been previously examined in any School in the County.

*Intermediates* are children of eight years of age, who have not previously been examined as intermediates.

*Leavers* are children of 12 years of age or over, who have not previously been examined as Leavers.

- (2) *Specials.*—These are children who do not come within the Code groups, but are brought for examination by their parents, picked out by the teachers, attendance

officers, or by the Medical Inspector at the "March Past," because they are suspected to be suffering from some defect.

Included in this group are "irregular attenders," and children absent from School without any reason assigned, and brought up for examination by the Attendance Officers.

- (3) *Re-examinations*.—Included in this group are all children who at a previous inspection were found to be suffering from some defect.

Full statistical particulars of all these examinations will be found in Table I., at the end of this Report.

The following is a condensed summary :—

		<i>Boys.</i>		<i>Girls.</i>		<i>Total.</i>
Entrants .. ..	..	1803	..	1688	..	3491
Intermediates ..	..	1074	..	1076	..	2150
Leavers .. ..	..	1676	..	1562	..	3238
<hr/>						
Code Groups.. ..	..	4553	..	4326	..	8879
Specials .. ..	..	2158	..	2410	..	4568
Re-examinations ..	..	659	..	669	..	1328
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		7370	..	7405	..	14775
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From this it will be seen that 14,775 examinations of children have been made and that 13,447 individual children have been examined.

The number of re-examinations has been small, owing to changes in and shortage of staff during a great part of the year.

(b) In the Inspection the Board's Schedule has been, as in former years, followed, with the exception that the children are not weighed. In the past this has been done, in most Schools, by means of portable weighing machines, but they have been so often broken and put out of working order in transit, that this plan has had to be given up as a failure. At the present time it is out of the question to consider buying a weighing machine for each School or even group of Schools.

(c) *Steps taken to secure the early ascertainment of crippling defects* :—

The early ascertainment of defects of whatever nature should be an important part of Medical Inspection.

Every effort is made in this area with that object.

Naturally, all defects are noted which occur in the "Code" groups. The "March Past," as its name implies, is a march of all the children in attendance past the Medical Officer, so that he may pick out any who look to him as if they required attention. They are subsequently more carefully examined.

Teachers are asked to bring any child forward for examination as a Special, who he has any reason to think is defective in some way. Parents also are asked to bring any of their children, other than "Code" groups, for examination if they have any reason to think they have some defect.

Attendance Officers are asked to bring to School on the day of inspection all irregular attenders, and all children who are absent from School but not receiving medical attention. Due care is, of course, exercised in infections or contagious cases.

A list of all ailing children is kept by the Medical Officer of each area, and these children are looked up from time to time as opportunity arises.

Organisers of physical training also draw the attention of the Medical Officer to any ailing children coming to their notice for example, children who do not join in games as normal children should.

School arrangements are scarcely, if at all, interfered with by the Medical Inspection.

#### *FINDINGS OF MEDICAL INSPECTION.*

A review of the facts disclosed by Medical Inspection is set out in Tables II. and V. at the end of this Report.

In Table II. is shown the number of defects found, and in Table V. is shown the number of children found to be defective, so that the numbers in the two tables do not necessarily correspond.

The total number of children examined, whether as routines (*i.e.*, Code groups) or Specials, was 13,447. Of this number 6,627, or 49%, were found to have some defect which required treatment or required to be kept under observation.

A considerable number of these defects were of a minor nature, such as uncleanliness or some slight skin disease, nevertheless it is a somewhat startling fact that 49% of the children examined showed some—even a slight—departure from normal.

If we considered the code groups a fair sample of the School population, and we may fairly do so, because they are selected only on an age basis, and not, as the specials are, because they

are suspected of having some defect, then we find that of the 8,879 code children examined, 2,088, or 23%, had some defect, other than uncleanness of head or body, for which treatment was considered necessary.

But in addition we find that in 2,261, or 25%, although no definite defect, could be found, their condition was such that it was deemed advisable to keep them under observation, and to make a further examination.

The obvious conclusion to draw from these figures is that the examination made is an exceedingly careful one, and that the slightest deviation from normal is noted, and that no child with even such a slight deviation is allowed to pass out of the sight of the medical inspector without further examination.

(a) *Uncleanliness.*

Of the 8,879 routine children examined, 5% were found to show unclean conditions of the head or body.

Uncleanliness is not now nearly so rife in our Schools as it was in former years, the steps taken to reduce it have so far been successful as to reduce the percentage from something like 30 to the present figure of 5.

The old belief that it was a sign of health and strength to have vermin and nits in the head is gradually being killed. Most people have learnt that nits are the eggs of lice, and that under favourable, *i.e.*, dirty, conditions, will come to life in about a week if left alone.

Fortunately now the majority of people look upon it as a disgrace to have their children excluded from School for this condition.

Uncleanliness in our Schools can now be considered as confined to one class of the community, namely, the children of habitually dirty and careless parents, but whilst they are allowed to send their children to School in what may be considered their normal condition, a certain number of clean children must become infected from them.

Whilst this is so, the careful and clean parent has a just grievance against the School, and it is up to all of us who have anything to do with the Schools, to do all in our power to protect the clean children from contamination by the habitually dirty. Everything that experience suggests has been, or is being, tried, but here we are confronted with exactly the same problem as housing reformers have always had to face for the dirty and careless tenant is in all probability the same individual who is the habitually dirty parent.

In the routine Medical Inspection, not many of these cases are found amongst the "Code" groups, because the date of the inspection is known some time before it takes place, and a special "clean up" for the day is indulged in.

In the "March Past" all dirty children are picked out by the Medical Officer, but even then a "clean up" is more or less manifest.

(b) *Minor Ailments.*

Included in this group are various external eye, skin and ear diseases, particulars of which will be found in Table II. Such trivial and common ailments of children as small septic sores, cuts, burns, etc., are also included.

Of these conditions 1,258 were noted, 1,078 were referred for treatment, and 180 to be kept under observation.

(c) *Tonsils and Adenoids.*

Of the "routines," 950 (10.7%), and of the "specials," 670 (14.6)%, had some enlargement of the tonsils, adenoid growth, or both.

This condition is general throughout the County, and does not appear to be markedly more prevalent in one area than another, nor in Urban than in Rural districts.

(d) *Tuberculosis.*

56 cases of definite Pulmonary Tuberculosis were found, 23 in routines and 33 in specials. The condition was suspected in 81 cases among routines, and 99 among specials. Tuberculosis of glands was found in 22 cases, 11 routines and 11 specials, in addition, tuberculosis in various other parts of the body.

(e) *Skin Diseases.*

These diseases were very prevalent during the year, there were 277 on Impetigo, 193 of Scabies, and 128 of Ringworm (88 of the head and 40 of the body).

In some Schools much trouble was caused by repeated outbreaks of Scabies, children excluded from School remained away a long time, and did not then get rid of the disease. On enquiry being made, whole families, including the parents, School children, and children under School age, were found infected. Steps were taken to have these cases thoroughly dealt with, and the outbreaks came to an end.

(f) *External Eye Diseases.*

The most common of these diseases is Blepharitis, of which there were 262 cases.

(g) *Defective Vision.*

938 cases were noted, 613 were so defective as to require immediate treatment, and 325 cases to be kept under observation. In addition to these, 294 cases of Squint, in the large majority of which there is a serious defect of vision.

(h) *Ear Disease and Hearing.*

Of Defective Hearing 119 cases were noted, 67 were referred for treatment, and 52 to be kept under observation.

Of Ear Diseases 106 were noted.

(i) *Dental Defects.*

In Table II. the figures shown represent only the cases in which there was practically not a sound tooth in the head, or in which the mouth was in such a septic condition as to seriously interfere with the child's health..

A special enquiry has been made by Dr. Gibson in his area, and given later in this Report, as it may be taken as typical of the conditions throughout the County.

(j) *Crippling Defects.*

Under this heading are included Rickets, Spinal Curvature, and other forms of deformity 316 cases were noted, 141 referred for treatment, and 175 to be kept under observation, or for which treatment was not advisable.

## VI.—INFECTIOUS DISEASES.

Information regarding Infectious Diseases (whether notifiable or not) reaches the School Medical Officer through Nurses, Head Teachers, School Attendance Officers, as well as through the Local Medical Officer of Health.

Head Teachers and Attendance Officers notify both the School Medical Officer and the local Medical Officer of Health of any infectious or suspected infectious disease that may come to their notice. Any information coming otherwise to the notice of the School Medical Officer is at once communicated to the Medical Officer of Health.

The closure of and exclusion of children from School are dealt with under Article 45 (b) of the Code. The Medical Officer of Health on becoming aware of a case of infectious disease excludes the scholar, and notifies the School Medical Officer. In the same way, if the Medical Officer of Health considers that closure of a School is advisable, he can, if the matter is urgent, close the School, and subsequently obtain the approval of the School Medical Officer.

Forms of certificates for the purpose are provided. This method is found so simple and convenient that closure under Article 57 of the Code is never now resorted to.

### *VII.—FOLLOWING UP.*

All defects found at the Medical Inspection come under one of three heads :—

- (1) Requiring treatment (or advice).
- (2) To be kept under observation.
- (3) For statistical purposes, but not requiring or likely to require treatment.

For all cases, with the exceptions mentioned later, requiring treatment, a defect slip is made out. On these defect slips, in addition to the name, age, etc., of the child, is a note of the defect, with instructions for the nurse as to the treatment.

On the defect slip space is left for the nurse to make any remarks as to progress and treatment she may consider necessary, together with details of her visits to the child. Each visit, together with progress or otherwise, is noted on the defect slip.

When the defect has received treatment, and is remedied, the defect slip is sent by the Nurse to the Superintendent of Nurses, or should a case not receive any treatment, the defect slip is returned in the same way at the end of the year.

Cases of verminous conditions, Scabies, Ringworm of the body, and Impetigo, are not noted on defect slips, but on a special form of their own.

When the time arrives for the re-examination of a certain School, the Medical Officer prepares from the defect list, and from the defect slips counterfoils, a list of the children to be re-examined, and the parents of these children are notified of the day and time of re-examination, and are specially asked to be present.

That following-up may be adequately carried out, the following steps are taken :—

- (1) As soon as possible after the Medical Inspection, parents are informed of any defects found in their children.
- (2) By means of visits from Nurses inquiries are made, after a reasonable interval, to find out whether the suggested treatment has been carried out, or when advised whether medical advice has been sought.

- (3) In cases where no action to obtain treatment or advice has been taken, enquiry is made if there is any special reason for this, and if the reason is a remediable one the necessary action is taken. In the case of poverty being the obstacle, treatment can either be obtained at one of the clinics, or arrangements are made for treatment at home by the medical attendant of the family.

In the case of carelessness or indifference on the part of the parent, the case is reported to the Inspector N.S.P.C.C., and in the majority of cases as a result of his visits the necessary treatment is as a rule obtained.

- (4) The re-examination of all defective children is undertaken in as many Schools as possible, in order to ascertain any change in the condition primarily noted, or in order to note the effects of treatment.

A summary of the work done by School Nurses during the year is given below. 7,781 visits were paid to 3,751 cases.

<i>Condition.</i>	<i>No. of Cases.</i>	<i>No. of Visits paid</i>
Malnutrition .. ..	206	490
Uncleanliness .. ..	432	871
Skin Diseases .. ..	506	1695
Eye Conditions .. ..	992	1447
Ear Conditions .. ..	159	396
Nose and Throat Conditions	897	1843
Heart and Circulation ..	181	226
Lungs (Non-Tubercular) ..	215	512
Do. Tubercular .. ..	64	198
Other Tubercular Diseases ..	29	19
Nervous Conditions .. ..	2	3
Deformities .. ..	68	81
Total .. ..	3751	7781

The following-up by Nurses of cases of uncleanliness is probably, next to the influence of teachers, the most effective method we have of dealing with it.

Unexpected visits are made to Schools by the Nurses, no intimation of the day and time of these visits is given to anyone, and if it is found necessary, re-visits are made from time to time.

Shortage of staff has rather limited this work, but undoubtedly the work that has been done has been productive of much good.

105 visits to Schools have been paid by the whole-time Nurses, and in the areas where District Nurses are employed each Nurse has paid on an average three visits to each School in her area; a total of between 180 and 200 visits to Schools have thus been paid.

The total number of examinations for uncleanness made were :—

By Whole-time Nurses	..	..	..	3481
By District Nurses	..	..	..	22082

786 children were found by the Nurses to be unclean.

In dealing with the most troublesome cases, in former years proceedings were taken under Section 12 of the Children Act after due warning had been given, but this was found to do little, if any, lasting good.

The procedure now adopted is to give two warnings, and if matters are not put right, or after being remedied revert back to their former condition, the case is reported to the Inspector, N.S.P.C.C., who visits the parents at their homes, and sees that not only the School child about whom complaint is made is properly cared for, but that the other children in the house are cared for as well ; probably, too, their clothing and bedding as well.

This method has worked admirably, and, I think, its advantages are obvious, as it ropes in the house as well as the children under School age.

In the stamping out of uncleanness in Schools, much depends on the attitude of the Head Teacher, if he or she is determined that the children coming to School shall be clean, in time it can be brought about, but in doing this the teacher has an unpleasant duty to perform, because most of us know how irate the habitually dirty parent can be when confronted with his or her delinquencies. Duty, however, is not always pleasant, and much credit is due to many teachers who have persistently followed up these cases, and given the Nurses every help, and as a result their Schools have become absolutely transformed in this respect.

A novel method of remedying uncleanness is reported by Dr. McMurtrie in his area. He says :—" In one large boys' school, when a scholar offends in the matter of cleanliness, he is promptly marched off to the lavatory and scrubbed by senior pupils detailed for the purpose. The result is excellent."

### *MEDICAL TREATMENT.*

The scheme of treatment which was approved in 1914 has been improved and somewhat extended, and it was hoped to have it in full operation during the year, and this would undoubtedly have been done but for changes in the medical and nursing staffs, which interfered considerably with the whole work.

Provision has been made for the opening of nine Clinics in the County at Aspatria, Cleator Moor, Cockermouth, Egremont, Keswick, Maryport, Millom, Penrith and Wigton.

Those at Penrith, Maryport and Wigton, are the only three that have been open during the whole year; those at Keswick and Cockermouth were opened in the beginning of November, and it was only possible to open the Millom Clinic for the last six months of the year.

At the time of writing this Report, the Clinics are all open, with the exception of Aspatria, where it is not possible to get possession of the house; and Egremont, where an army hut was converted, but sanction to do this has, in the meantime, been refused by the Ministry.

There are now three methods open to School children requiring treatment:—

1. By Practitioners.—(a) Specialists; (b) General.
2. Treatment at Hospitals.
3. Treatment at Clinics.

Although it is not possible this year to give a full and detailed statement of the treatment carried out, the information given under the different headings will at any rate show that a very good commencement towards a complete scheme of treatment has been made, and that if children requiring it do not receive the necessary treatment, it is certainly not the fault of the Education Committee.

(a) *Minor Ailments.*

The treatment of minor ailments is carried out by the Nurses, under the direction of the Medical Officer, either at the Clinics or at the child's own home, where no clinic is available.

Ambulance outfits are supplied to those teachers who apply for them, and who hold the medallion, in order that they may treat minor ailments, such as cuts, small septic sores, accidents, etc., which are so common.

The Authority has also authorised the issue of Cod Liver Oil Emulsion, &c., and of simple ointments to district Nurses in areas unsupplied by clinics.

Of the 1,076 minor ailments referred for treatment, 693 were treated at the clinics or by the Nurses, and 141 were treated otherwise.

The work of the School Clinics at Penrith and Keswick is thus described by Dr. McMurtrie, and is interesting as showing how work was carried on in one Clinic (Penrith) open all the year, and in the other the means adopted for making the Clinic known.

## THE WORK OF THE SCHOOL CLINICS AT PENRITH AND KESWICK.

" The Penrith School Clinic was open during the whole year, and the Keswick School Clinic only during November and December.

Both were conducted on the same general principles. The Clinics were open on one day a week, and definite hours were allotted to each School in the neighbourhood during which children from that School were examined and treated.

All Head Teachers were asked to send the children from their School in a batch, with a teacher or senior pupil in charge. This rule could not be rigidly adhered to, as many parents wished to accompany their children, and had to be admitted at times convenient to them. Instructions were given verbally and by letter to parents as to treatment to be carried out at home. In many cases the method of applying dressings was demonstrated by the Nurse or Medical Officer. Medicines, ointments, lotions and dressings, were in many cases supplied free of charge to the poorer class of patient.

As there was no intermediate treatment at the Clinics, owing to the shortage of Nursing Staff, very little could be done in the way of treatment, but dressings were applied, septic conditions cleaned up, heads shaved, ears syringed, and so on.

Cleansing of verminous children was not undertaken on the premises, as no nurse was available.

In order to derive the full benefit from a Clinic such as either of these, two nurses would have to be on duty on the Clinic days, and one nurse, who should live in the town, should be in attendance at a fixed time every day.

As a compromise opening the Clinic on one other day a week with a nurse in charge would improve matters considerably. Cleansing of verminous heads could then be undertaken, and the treatment of Ringworm, Impetigo and Scabies. If verminous bodies were to be cleansed, arrangements for the issue of clean underclothing and the disinfection of verminous clothing would have to be made.

Under the arrangements existing in 1920, it was found that the one nurse who was present on Clinic days was fully occupied all the time undressing and dressing children, finding the cards of old cases, entering the necessary details on the cards of new cases, issuing the medicine, emulsion or ointment ordered, and ushering the children and parents

into the Consulting Room as required, and that she had practically no time to spare for treatment. If two nurses were available, the duties could conveniently be divided into administrative and clinical.

As *Keswick School Clinic* was opened for the first time on November 3rd, 1920, it may be of interest to record the methods adopted in advertising it.

A letter was sent to every Head Teacher in Keswick and the surrounding district, informing them of the days and hours when children from their School were to attend. A brief description of the aims and objects of the Clinic was given, and a list of the commoner ailments which could be most profitably dealt with. In addition, a list of all children who had been noted as being suitable for treatment at the Clinic at the previous School Medical Inspection was appended. An invitation was given to all teachers who were interested to come and see the Clinic while the work was going on.

A letter was also sent to the Superintendent of the Nursing Staff (Miss March) with a complete list of all the children whose names had been sent to the Head Teachers concerned, and details of the working of the scheme. Letters were also sent to the Superintendent of Attendance Officers giving details of the scheme, and to various individuals resident in the neighbourhood who had shown an interest in the undertaking.

With the exception of two, all the Head Teachers in Keswick took immediate advantage of the School Clinic. After several reminders, the Head Master of one School was prevailed upon to send his defective pupils, but up till the end of the year no boys from the other had attended, with the exception of one who attended the Remedial Clinic. The Headmaster, however, attended in person, and expressed his entire approval of the scheme.

In addition to the above propaganda, a large number of home visits were paid by the Nursing Staff, and many children brought to the Clinics in this way.

As an experiment, a new Clinic Form was devised to replace the Clinic Attendance Cards. The object of this was to give the names of all the children, who attended each day, to the Head Teacher for the purpose of marking the roll. Space was allowed for brief remarks, such as "excluded," "cured," "not to re-attend," etc., or for the diagnosis, and another space for the date of next attendance. By this form a considerable amount of time and trouble was saved, and it has since been adopted in a modified form throughout the County.

The attendances at this Clinic were most satisfactory, and the opening of a treatment centre in this district appears to have been justified in every respect.

(b) *Tonsils and Adenoids.*

The treatment of these conditions was, during this year, not satisfactory, as no arrangement had been come to for having operations performed in necessary cases.

Of the cases found, 862 were referred for treatment, 101 cases were operated on by private practitioners.

Arrangements have now been made with all the hospitals in the County, with the exception of the Cockermouth Cottage Hospital, to admit cases for operation on the production of a voucher, at a fee of £1 11s. 6d., and it is confidently expected that the present year will show a marked improvement in this respect.

(c) *Tuberculosis.*

Facilities for the treatment of Tuberculosis of the Lungs are very satisfactory, but no special facilities for the treatment of surgical tuberculosis exist.

During the year 43 children were sent to the Stannington Sanatorium, near Morpeth; 20 were discharged during the year, and all of these returned home very much improved. 23 were still in the Sanatorium at the end of the year.

On discharge from the Sanatorium, however favourable the condition of the child may be, dispensary treatment is recommended, not necessarily because any treatment is required, but in order that the child may be periodically examined, to see that the improvement is maintained or should further treatment be necessary to see that it is obtained. Observation is thus kept on all cases for from two to three years after being in a Sanatorium.

(d) *Skin Diseases.*

The great majority of these diseases are treated either at the Clinics or at the patient's own homes by the Nurses.

506 cases have been under treatment, and at the end of the year 435 cases had been satisfactorily dealt with.

Leaflets are issued for the more common of these conditions, giving directions to parents how to carry out treatment.

(e) *External Eye Diseases.*

Much the most common and troublesome of these conditions is Blepharitis, which is an eczematous condition of the margins of the eyelids, due in the great majority of cases to dirt and neglect, and frequently found associated with dirty, verminous and sore heads, the septic matter from which is transferred to the eyelids after scratching the head.

Printed instructions for treatment are issued in each case, and all the 227 cases noted received treatment during the year.

(f) *Vision.*

Of the 613 cases of Defective Vision, 564 received treatment during the year. 281 were treated by Dr. Ross, the Ophthalmic Surgeon in Carlisle; the remainder by private practitioners or otherwise. Experience has shown that a certain number of eye cases require hospital treatment and possibly operation; arrangements have been made with the Cumberland Infirmary, Carlisle, to subsidise one bed for this purpose.

(g) *Ear Disease and Hearing.*

Cases such as "running ears" are treated at the Clinics or by Nurses; 57 cases were so treated during the year.

Several serious ear conditions, many of which required operation, were found.

We are fortunate in having obtained the services of Dr. Syme, of Glasgow, who visits Carlisle two days per week, and sees these cases, and, if necessary, operates.

This arrangement, however, was not in operation during the year 1920.

(h) *Dental Defects.*

An attempt was made during the year to commence with the treatment of dental defects. Two whole-time dentists were appointed, but for one reason or another neither of them stayed sufficiently long to carry out any treatment.

A certain amount of inspection was done, which was sufficient to convince any sceptic that of all diseases affecting children the commonest, and the one demanding treatment most urgently, was the treatment of their teeth.

It is no exaggeration to state that at least 80% of the School children throughout the County require dental treatment.

Another appointment has now been made, and I hope in my next Annual Report to be able to record satisfactory progress.

In Table IV., the cases referred to under heading C. are only the very worst cases, which, owing to the septic condition of the mouth, demanded immediate treatment.

Dr. Gibson, in his area, made a special enquiry into dental conditions, and I publish his observations under a separate heading in this report.

(i) *Crippling Defects and Orthopædics.*

Dr. Kenneth Fraser has made these conditions the subject of special study, and has had under his charge the whole of the arrangements for this branch of work. I have, therefore, asked him to report briefly on the cripple problem in this County, and in my next report I hope to publish a comprehensive report by him on this most important subject.

Dr. Fraser reports :—

“ During 1920 very considerable progress has been made in the matter of the treatment of Crippled children in the County.

Very exhaustive enquiries have been made as to the incidence and causation of crippling among the School children, and a Register has been compiled as a result of these enquiries, which shows that among the School children of the County, including Secondary School children, there are not less than 150 cases of serious crippling which require treatment at special Orthopædic Hospitals. The enquiry has taken into consideration children “ not at School ” on account of some crippling condition. In addition to these children there are some hundreds with minor degrees of deformity, including Spinal Curvature, which can be treated in the County, and there are a number of cases of children with defects of types which are not amenable to treatment, for example, Congenital absence of one hand.

During the year 16 cases have been admitted to the Ethel Hedley Hospital, at Windermere, and six to the Orthopædic Hospital, Oswestry.

In addition, a number of cases have been operated on at the Cumberland Infirmary, while the parents of some seven or eight children have refused the offer of Hospital treatment.

Up to the end of the year, the question of After-care had not arisen, as no cases in which After-care was required had been discharged from Hospital.

The importance of After-care is, however, fully realised, and the Education Committee authorised the School Medical Officer to grant a month's leave of absence to one of the Medical Staff for the purpose of special study on this subject. Arrangements are also in hand for the appointment of an After-care Nurse, to be shared by Cumberland and two other Education Authorities. Finally, eight Remedial Clinics have been equipped. At these Clinics, Swedish remedial exercises, massage, a limited amount of electrical treatment will be given by Members of the Physical Training Staff. Unfortunately the vacancies on the staff have limited the amount of work which it has been possible to undertake

at these Clinics, and there is the prospect that several more will have to be temporarily closed early in 1921.

As will be seen from the attached Report of the Chief (Woman) Organiser of Physical Training, some 2,000 attendances at these Clinics were recorded during 1920.

It is probable that these Remedial Clinics will become Centres at which Plaster, and After-care generally, will be undertaken.

It is hoped to arrange for the visit, at least twice a year, of a consulting Orthopædic Surgeon to the County to supervise the After-care and to see new cases.

As to the causation of the existing crippling conditions among children in the County, investigations have confirmed the fact that crippling due to Rickets is almost non-existent, while cases of Surgical Tuberculosis of bones and joints are relatively few. The chief cause of the crippling conditions which are under observation has been an outbreak of Infantile Paralysis dating back some ten years. In addition, there are a number of cases of Hemiplegia and of Congenital defects.

All the Health Visitors and District Nurses in the County have received instructions to notify immediately all cases of crippling defects among infants and children under five years of age.

Up to the end of the year no notifications of any cases had been received. It is possible that this may indicate failure to diagnose such cases, but I do not think that this is so, as the instructions were clear and definite. The feeling is gaining ground that when our existing cripples have been dealt with the problem will resolve itself into one of small annual dimensions.

It is hoped to invite the Medical Practitioners of the County to the Clinics held by the consulting Orthopædic Surgeon at his visits, which have been referred to above. There is little reasonable doubt that these measures will place the whole question of the treatment of cripples in the County on a thoroughly sound basis at no distant date.

It is proposed to arrange for the supply of Appliances from the Orthopædic Hospital at Oswestry. Such an arrangement has a two-fold advantage. The prices compare very favourably with those quoted by firms of Surgical Instrument Makers, and the placing of the orders will assist in finding employment for cripples at the Hospital, who would otherwise find it difficult to earn a living.

This question leads naturally to the last and most difficult aspect of the cripple problem to be solved, viz., the finding of occupation for our cripples on their leaving School. It is not necessary to do more than to say that the problem is, in Rural areas especially, difficult of solution, as there are very few factories which might offer specialised employment in "repetition" work suitable to the employment, on economic lines, of the physically deformed.

#### *IX.—OPEN-AIR EDUCATION.*

Beyond the fact that some teachers hold classes in the playgrounds in suitable weather, nothing is done in this direction. Day Open-air Schools would, in my opinion, be useless in this County, but there is great need for a residential open-air School. It would, however, be a very expensive item, and cannot be advocated at the present time.

#### *X.—PHYSICAL TRAINING.*

So far as remedial work is concerned, the association between the School Medical Service and the Physical Training Staff is intimate. Remedial clinics are held on the same days, and at the same time as the School Clinic, in order that the Medical Officer may see the cases and supervise the work.

The matter of extending and re-organising the work of physical training has been referred to a Special Committee for consideration.

The Reports of Miss Spencer and Mr. Gray, the Chief Organisers, are appended.

#### *XI.—PROVISION OF MEALS.*

When necessity arises, meals are provided either at the Schools or Cookery Centres, or in a special room for the purpose.

The School Medical Officer is always consulted as to the suitability of the arrangements made and the dietary provided.

#### *XII.—SCHOOL BATHS.*

No School baths have up to the present been provided.

#### *XIII.—CO-OPERATION OF PARENTS.*

The presence of parents at the primary examination is not a matter of great importance, although each parent is always invited to be present. At the re-examination of a defective child, however, the parent's presence is often of the utmost value, and if the parent does not come in response to the invitation sent previous to the re-examination, a special effort is made either by sending for the parent or by, in some cases, the Medical Officer visiting the home.

In No. 1 area, Dr. McMurtrie reports :—" The number of parents present at the Medical Inspections shows a large increase when compared with previous years, and may be taken as an indication of increased interest in the work, and a greater reliance being placed on the advice given by the School Medical Officer. The number given (337) does not include parents present at the re-examinations or at the Clinics."

In No. 2 area, Dr. Gibson reports :—" At the routine inspections 437 parents were present, and at the re-visits 177. These numbers are small compared with the numbers of children examined, but most of the Schools are rural, and the long distances which many of the parents would have to cover prevent them from being present, unless they have reason to know that there is something definitely wrong with their children. The number who attended the re-visits is a little disappointing, for the presence of parents on these occasions is most necessary, in order that any difficulties they may have experienced in getting treatment carried out may be discussed with them."

In No. 3 area, Dr. Manson reports that :—" Over 500 parents attended at the routine examinations, and almost 200 at the re-examinations. The presence of parents at the re-examinations is especially desirable, so that their attention may be called to the defects originally reported, if they still exist, and the necessary advice as to the importance of treatment be given them."

In No. 4 area, Dr. Adam reports that :—" The parents of 10% of the children examined were present at the inspection. The attendance of parents varied considerably, and, as one might expect, was largest in the infant Schools."

In No. 5 area, Dr. Mason reports that :—" Only a small percentage of parents were present at the inspection at the Cockermouth Schools. When deemed advisable to see a parent, who is not present at the time of examination of the child, a message sent to the home asking a parent to come usually results in the request being complied with. Parents who attend the inspection seem keen to take the advice given. In the co-operation in subsequent treatment of defects, difficulties are commonly experienced. Visit by the Nurse is often at first resented, but after the first visit she is usually welcomed (except perhaps by the uncleanly)."

#### *XIV.—CO-OPERATION OF TEACHERS.*

A large majority of the teachers in the County are keenly interested in the work of Medical Inspection and treatment of the children, and I am glad to acknowledge the willing help the whole of the medical staff has always received.

A considerable amount of extra work has been thrown on the teachers in filling in parts of the schedules and forms, and in many instances the carrying out of the treatment recommended has been due to the persuasive influence of the teacher.

In some few instances much more might be done in insisting on the cleanliness of the scholars ; two or three of the Schools are rather notorious for the number of verminous and dirty children.

#### *XV.—CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.*

The usual close co-operation between the medical staff and the attendance officers has been maintained. Much help is given by them in bringing "specials," "irregular attenders," &c., forward for examination, and in following up children excluded from School.

#### *XVI.—CO-OPERATION OF VOLUNTARY BODIES.*

The work done by the National Society for the Prevention of Cruelty to Children has already been referred to.

#### *XVII.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.*

There are no special Schools for these children in the County, any found are, as soon as beds can be obtained for them in institutions outside the County, sent to suitable institutions. Information in regard to these children is gained from all available sources.

The Medical Officer of each area has a list, which was compiled in 1913, and, so far as possible, these lists have been kept up-to-date.

During the year a Census of all School children was taken by the Attendance Officers, including those of School age but not at School. So far as is possible, all these children will be visited during the present year.

#### *XVIII.—There are no NURSERY SCHOOLS in the area.*

#### *XIX.—SECONDARY SCHOOLS.*

Appended will be found reports on the inspection of the Whitehaven Secondary School by Dr. Muriel, and of those in the other parts of the County by Dr. Kenneth Fraser.

As the year 1920 was the first year in which the Secondary Schools in this area were systematically inspected, I thought it was of the utmost importance that the whole system should be placed on a secure footing, I therefore requested Dr. Fraser to undertake this work, and I have much pleasure in submitting his and Dr. Muriel's reports on the Secondary Schools.

■ Many valuable suggestions are made in Dr. Fraser's report, which will, in due course, be considered by the Secondary Schools Committee.

XX.—There are no *CONTINUATION SCHOOLS* in the area.

XXI.—*EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.*

Bye-laws under the Employment of Children Act, 1903, as amended by the Education Act of 1918, have been passed by the Education Committee, and approved by the Home Office, but no action as regards the School Medical Service has yet been taken.

XXII.—*SPECIAL ENQUIRIES.*

Dr. Gibson in his area has made a special enquiry into the condition of the teeth, and I have pleasure in submitting his Report here :—

DEFECTIVE TEETH.

“ Under “ Dental Diseases ” are shown 38 Routines and 23 Specials referred for treatment. These numbers represent the cases of marked oral sepsis which were found ; they do not by any means represent the number of cases which required dental treatment, for, had all such cases been included, there are very few children indeed in the area whose names would not have appeared on the list of children having defects. At all the re-visits records were kept of the total number of children in each School who required dental treatment, and the figures show that of 4,558 children examined, as many as 3,930, or 86%, were in need of treatment.

“ The distribution of dental caries is remarkably uniform over the area. In every one of the Schools the percentage of children with defective teeth was found to be greater than 75%. In 12 Schools the percentage was 76 to 80 ; in 21 it was 81 to 85 ; in 23 it was 86 to 90 ; whilst in five Schools the percentage with bad teeth was over 90%. The worst in this respect were Aspatria (Mixed) and Wigton R.C. (Mixed) with 94% each ; Wigton C. of E. (Mixed), Alston High School, and Silloth (Mixed) with 93% each. It will be noted that these five are all Urban Schools, and they are the only Urban Schools in the area, but this does not prove conclusively that the teeth of Urban children are worse than those of children in rural parts, for we have to take into account that in the towns mentioned there are Infants' Schools in addition to the mixed Schools, and the teeth of infants are much better than those of older children. Thus the percentage of children with bad teeth at these Infants' Schools were found to be :—

Aspatria Cl. Infants' ..	80%	Wigton C. of E. ..	88%
Harriston Infants' ..	84%	Infants'	
(Aspatria)		Alston Infants'	80%
Wigton R.C. Infants' ..	88%	Silloth Infants'	80%

However, if we combine the numbers with defective teeth at the Infants' and Senior Schools at each place, we get the following figures :—

Aspatria, 90% ; Wigton R.C., 92% ; Wigton C. of E. 91% ; Alston, 87% ; and Silloth, 89%.

" All of these figures are higher than the average of the area (86%), so that undoubtedly the teeth of the Urban children are worse than those of the rural children.

" Whilst carrying through this dental inspection, note was taken of the age of every child found with *sound* teeth, and the figures obtained in this way are interesting :—

Age 3	number with sound teeth	..	..	4
" 4	" " "	..	..	26
" 5	" " "	..	..	140
" 6	" " "	..	..	86
" 7	" " "	..	..	48
" 8	" " "	..	..	34
" 9	" " "	..	..	20
" 10	" " "	..	..	45
" 11	" " "	..	..	58
" 12	" " "	..	..	84
" 13	" " "	..	..	56
" 14	" " "	..	..	9

" The numbers found at the ages 3, 4 and 14, are of little importance, as a considerable number of children of these ages have either not started to go to School or have left ; but at the ages 5 to 13 inclusive, practically all the children attend School, and as all the children at each School were inspected, we might assume that, for all practical purposes, the number of children seen at each age period was the same. What a contrast there is, however, in the numbers with sound teeth at these different ages !

" Roughly speaking, there were about 470 children examined in each group, and, on this assumption, we get from the above figures the following percentages :—

Age 5..	29.8 per cent.	Age 10 ..	9.6 per cent.
" 6..	18.3 "	" 11 ..	12.3 "
" 7..	10.2 "	" 12 ..	17.9 "
" 8..	7.2 "	" 13 ..	11.9 "
" 9..	4.3 "		

" At five years there is a comparatively large number of children with sound teeth. The percentage falls steadily and rapidly through 6 years, 7 years, 8 years, and reaches its lowest at 9 years. At this age it has reached its lowest level, as far as School life is concerned, and it rises steadily again until the age of 12 is reached, after which it falls again. It is difficult to say how far it would drop on this second decline, but it certainly falls again rapidly.

" What then is the explanation of this marked fall, from 5 to 9, the rise from 9 till 12, and subsequent fall again ?

" The explanation is evident when we take into account the fact that during the child's School life all his or her temporary teeth are replaced by the permanent teeth, and that the replacing process is a gradual one extending over several years. Were the temporary teeth only taken into consideration, the fall on the sound teeth percentage would be an uninterrupted one ; but at 6 years four permanent teeth make their appearance, from 7 to 8 years eight more appear, from 9 to 10 years, eight more, and so on. From the seventh year onwards the permanent teeth replace, as they appear, the corresponding temporary teeth, but the tenth year has been reached before a sufficient number of children have had all their decayed temporary teeth replaced to make an impression on the falling sound teeth percentage. During the ages of 10, 11, 12 and 13, more and more of the decayed temporary teeth are being disposed of, and the sound teeth percentage gradually rises, but not up to 13 years ; it stops at 12, and here it starts on its downward course again. This means that, even at this early age, the permanent teeth have begun to suffer, and no doubt after this age the sound teeth percentage would fall lower and lower unless it were interrupted in its course by dental treatment. And how few of the children at this age receive dental treatment ! It is a matter for serious consideration that at 13 years of age, when all the temporary teeth have been replaced by permanent teeth, 88% of the children in the area have been found with dental caries.

" If only parents would realise the many ill effects which may result, and often do result from decayed teeth, I am sure they would not neglect their children's teeth as they do. To give a complete list of defects which may be so caused would be well nigh impossible, but I might mention a few which are commonly met with.

(1) *Enlarged Cervical Glands.*

" From the statistics it will be seen that 67 children were found with enlarged cervical glands (non-tubercular), and I am certain that in a very large number of these cases the enlargement was due to absorption from decayed teeth. Of course, Oral Sepsis is not the only cause of such enlargement, but it is a significant fact that, out of all these cases, I saw only *one* who had sound teeth. The enlargement in itself is really a protective process guarding the body as a whole against the various organisms which are carried thither by the lymphatics from the teeth. Unfortunately, however, the invading organisms sometimes win in the contest, and then abscess formation results, with its disfiguring

scars, or, worse still, the glands may become tubercular. In such cases it is possible that the Tubercle Bacilli have already been in the circulation, and that having been carried to an unhealthy gland, they are able to flourish there. It is more probable, however, that the Tubercle Bacilli gain an entrance through the decayed teeth or unhealthy gums, and that they are carried direct by the lymphatics to the cervical glands.

(2) *Enlarged Tonsils, Pharyngitis, Otitis Media, and Gastro-intestinal Disturbances.*

"These conditions are so often associated with dental caries that it seems almost certain that it is one of their causes. There is no doubt with regard to Pharyngitis, for it has been often shown that children who had repeated attacks of this complaint ceased to have any trouble of the kind when their teeth had received attention. And frequent attacks of Pharyngitis give rise to enlarged tonsils, Eustachian Catarrh, and even Otitis Media. Moreover, the very large amount of poisonous matter discharged by a row of decayed teeth is certain to have a damaging effect, when swallowed, on the mucous membrane of the Gastro-intestinal tract. Many of the attacks of Diarrhoea and abdominal pain in children are directly attributable to this cause. Mr. F. St. J. Steadman tells in the 'Lancet' (February 7th, 1920), of a little girl who had been treated on account of symptoms of this kind for fourteen months without improvement; finally her mother determined to have her teeth attended to, and three or four weeks after all the carious teeth had been extracted the child was practically quite well.

(3) *Many other Conditions, such as Anæmia, Malnutrition, &c.*

"Bad teeth usually give rise to toothache, and this alone is sufficient to account for much of the Anæmia and general debility found in children, for with persistent toothache there is loss of sleep and nervous irritation, and mental and physical growth is retarded. Dr. Waller (in the 'Lancet' in 1916) made an observation which shows how far reaching are the effects of oral sepsis. He pointed out that bad teeth not only interfered with the health of nursing mothers themselves, but that the mothers' bad teeth had a marked effect on the nutrition of their babies. The parents of an anæmic and mal-nourished child usually look aghast when the suggestion is made that all decayed teeth should be extracted. They imagine that bad teeth are better than no teeth, and that without these teeth the child's condition will become worse. This is not so, however, for it has been observed repeatedly that a child in this condition is greatly benefited by extraction of the carious teeth, even though mastication is for the time being very imperfect.

(4) *Chronic Diseases of Adult Life.*

"Dental caries is a condition which is allowed in most cases to progress for many years during which time toxin, or poisonous matter of some sort is being absorbed into the circulation. This is bound to have a deleterious effect and many of the chronic diseases of adult life are attributable to it. Examples one might mention are Gastritis, Gastric Ulcer, and even the aetiology of such an obscure disease as Rheumatoid Arthritis has been traced to it. Mr. A. H. Tubby Consulting Surgeon to the Westminster Hospital, in a recent article appearing in the 'Practitioner,' gives it as his opinion that in 75% of all cases of this disease the focus of toxæmia is in the jaws.

"Of all the conditions which one finds among children, I am convinced that there is none which has more numerous ill effects than dental caries, and yet of all the defects referred to parents for treatment after a School Inspection, there is none which receives so little attention. Of the 61 cases referred for treatment, this year, all cases of marked Oral Sepsis, too, only 19 had anything done.

"There is no doubt that the work about to be undertaken at the new dental clinics will have far reaching results in improving the general health and physique of the children, and yet one feels that the neglect of this matter in the past has not been a question of expense. It has been due rather to ignorance of the many ill effects which bad teeth may produce. Indeed some people believe that it is harmful to extract any of the temporary teeth, and that if this is done the shape of the mouth is certain to be altered. Experience has shown that this is not so, for even when all the teeth on one side are gone, the jaws still reach their normal development on both sides. All temporary teeth should be extracted when the pulp is extracted, if for no other reason than this that by doing so the chances of the permanent teeth being infected also are lessened. The only argument against early extraction of temporary teeth is that forward movements of the permanent teeth may result, thus causing crowding and irregularities. However, it is very seldom necessary to extract until the six-year-old molars have occluded, and after this there can be very little forward movement. And even though there should happen to be a little irregularity of the teeth, surely irregular teeth are better than decayed teeth, and certainly the health of the child should have prior consideration.

## XXIII.—MISCELLANEOUS.

During the year 117 candidates for places as teachers, bursars, etc., have been examined.

*County of Cumberland.*

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**XXIV.—STATISTICAL TABLES**

*For the Year 1920.*

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Table I.—Number of Children inspected.

Table II.—Return of Defects found.

Table III.—Numerical Return of all Exceptional Children.

Table IV.—Treatment of Defects of Children.

Table V.—Summary of Defects of Children.

Table VI.—Summary relating to Children Medically inspected at the Routine Inspections during the Year 1920.

# APPENDIX A.

## COUNTY OF CUMBERLAND.

TABLE I.

NUMBER OF CHILDREN INSPECTED—JANUARY 1st, 1920, TO DECEMBER 31st, 1920.

### A.—ROUTINE MEDICAL INSPECTION.

ENTRANTS.							INTERMED. GROUP.	LEAVERS.					Grand Totals.
Age.	3	4	5	6	Other Ages.	Total.		12	13	14	Other Ages.	Total.	
Boys ..	57	330	875	491	50	1803	8	1074	473	38	115	2750	4553
Girls ..	34	289	870	456	39	1688		1076	436	39	127	2638	4326
Totals ..	91	619	1745	947	89	3491		2150	909	77	242	5388	8879

### B.—SPECIAL INSPECTIONS.

	Special Cases.	Re-examina- tion (i.e., No. of Children Re-examined)
Boys ..	2158	659
Girls ..	2410	669
Totals ..	4568	1328

C.—TOTAL NUMBER OF INDIVIDUAL CHILDREN  
INSPECTED BY THE MEDICAL OFFICER,  
WHETHER AS ROUTINE OR SPECIAL CASES  
(no Child being counted more than once  
in one year).

Number of individual Children inspected .. ..	13447
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COUNTY OF CUMBERLAND.

**TABLE II.—RETURN OF DEFECTS FOUND IN THE COURSE OF  
MEDICAL INSPECTION IN 1920.**

DEFECT OR DISEASE.		ROUTINE INSPECTIONS.		SPECIALS.	
		No. referred for treatment.	No. requiring to be kept under obser- vation, but not referred for treatment.	No. referred for treat- ment.	No. requiring to be kept under obser- vation, but not referred for treatment.
(1)		(2)	(3)	(4)	(5)
Skin	Malnutrition .. ..	127	108	51	33
	Uncleanliness—				
	Head .. ..	377	12	437	13
	Body .. ..	66	28	41	4
	Ringworm, Head ..	32	5	50	1
	Do. Body .. ..	21	3	15	1
	Scabies .. ..	110	1	81	1
	Impetigo .. ..	95	4	177	1
	Other Diseases (Non-tubercular) ..	24	47	38	21
Eye	Blepharitis .. ..	124	26	103	9
	Conjunctivitis .. ..	12	1	10	—
	Keratitis .. ..	4	—	6	—
	Corneal Ulcer .. ..	4	—	9	—
	Corneal Opacities ..	1	20	2	25
	Defective Vision ..	332	199	281	126
	Squint .. ..	74	65	93	62
	Other Conditions ..	3	6	7	11
Ear	Defective Hearing ..	26	26	41	26
	Otitis Media .. ..	38	4	59	6
	Other Ear Diseases ..	2	4	2	1
Nose & Throat	Enlarged Tonsils ..	229	441	311	141
	Adenoids .. ..	46	61	45	40
	Enlarged Tonsils and Adenoids .. ..	123	50	108	25
	Other Conditions ..	7	10	11	8
	Enlarged Cervical Glands (Non-tubercular) ..	17	140	12	57
	Defective Speech ..	—	46	1	37
	Teeth—Dental Diseases	128	22	82	9
Heart & Circulation	Heart Disease—				
	Organic .. ..	43	39	29	58
	Functional .. ..	16	257	8	110
	Anæmia .. ..	80	73	74	45
Lungs	Bronchitis .. ..	34	123	17	45
	Other Non-tubercular Diseases .. ..	30	242	24	180
Tubercu- losis..	Pulmonary, Definite ..	21	2	29	4
	Do. Suspected ..	72	9	88	11
	Non-Pulmonary—				
	Glands .. ..	7	4	10	1
	Spine .. ..	—	1	1	—
	Hip .. ..	3	—	2	2
	Other Bones & Joints ..	—	1	1	1
	Skin .. ..	3	—	2	—
	Other Forms .. ..	2	1	2	2
Nervous System	Epilepsy .. ..	3	5	2	5
	Chorea .. ..	3	—	5	6
	Other Conditions ..	1	27	9	41
Deformi- ties	Rickets .. ..	4	25	1	17
	Spinal Curvature ..	28	32	43	30
	Other Forms .. ..	24	36	41	35
	Other Defects and Diseases	35	96	40	53
Number of Individual Children having Defects which required Treat- ment or to be kept under observation .. ..					6627

Date		Description		Amount	
1890	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1891	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1892	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1893	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	

COUNTY OF CUMBERLAND.

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA IN 1920.

				Boys.	Girls.	Total.	
Blind (including partially Blind) within the meaning of the Elementary Education. (Blind and Deaf Children Act, 1893)	Attending Public Elementary Schools .. .. .			1	—	1	
	Attending Certified Schools for the Blind .. .. .			—	—	—	
	Not at School .. .. .			1	1	2	
Deaf and Dumb (including partially Deaf, within the meaning of the Elementary Education. (Blind and Deaf Children Act, 1893)	Attending Public Elementary Schools .. .. .			—	1	1	
	Attending Certified Schools for the Deaf .. .. .			—	—	—	
	Not at School .. .. .			1	2	3	
Mentally Deficient		Attending Public Elementary Schools .. .. .			7	8	15
		Attending Certified Schools for Mentally Defective Children ..			1	1	2
		Notified to the Local Control Authority by Local Education Authority during the Year ..			4	2	6
		Not at School .. .. .			5	2	7
	Imbeciles	At School .. .. .			—	—	—
		Not at School .. .. .			4	6	10
	Idiots	— .. .. .			2	—	2
	Epileptics	Attending Public Elementary Schools .. .. .			7	7	14
		Attending Certified Schools for Epileptics .. .. .			—	—	—
In Institutions other than Certified Schools .. .. .			—	—	—		
Not at School .. .. .			5	4	9		
Physically Defective	Pulmonary Tuberculosis	Attending Public Elementary Schools .. .. .			21	16	37
		Attending Certified Schools for Physically Defective Children ..			—	—	—
		In Institutions other than Certified Schools .. .. .			—	2	2
		Not at School .. .. .			10	12	22
	Crippling due to Tuberculosis	Attending Public Elementary Schools .. .. .			—	—	—
		Attending Certified Schools for Physically Defective Children ..			—	—	—
		In Institutions other than Certified Schools .. .. .			—	—	—
		Not at School .. .. .			—	—	—
	Crippling due to causes other than Tuberculosis, i.e., Paralysis, Rickets, Traumatism	Attending Public Elementary Schools .. .. .			34	22	56
		Attending Certified Schools for Physically Defective Children ..			—	—	—
		In Institutions other than Certified Schools .. .. .			—	—	—
		Not at School .. .. .			5	3	8
	Other Physically Defectives, e.g., delicate and other children suitable for admission to Open air Schools: Children suffering from severe heart disease	Attending Public Elementary Schools .. .. .			28	36	64
		Attending Certified Schools for Physically Defective Children other than Open-air Schools .. .. .			—	—	—
		Not at School .. .. .			4	2	6
		Attending Open-air Schools ..			—	—	—
Dull or Backward	Retarded two years .. ..			176	105	281	
	Retarded three years .. ..			53	38	91	

TABLE III.—DEMENTIA AND OTHER MENTAL DISORDERS IN THE AREA IN 1910

Sex	Age	Total	Males		Females		Total
			No.	Per Cent	No.	Per Cent	
Male	Under 15	1	1	100.0	—	—	1
	15 to 24	—	—	—	—	—	—
Female	Under 15	1	—	—	1	100.0	1
	15 to 24	—	—	—	—	—	—
Total	Under 15	2	1	50.0	1	50.0	2
	15 to 24	—	—	—	—	—	—
Male	25 to 34	—	—	—	—	—	—
	35 to 44	—	—	—	—	—	—
Female	25 to 34	—	—	—	—	—	—
	35 to 44	—	—	—	—	—	—
Total	25 to 34	—	—	—	—	—	—
	35 to 44	—	—	—	—	—	—
Male	45 to 54	—	—	—	—	—	—
	55 to 64	—	—	—	—	—	—
Female	45 to 54	—	—	—	—	—	—
	55 to 64	—	—	—	—	—	—
Total	45 to 54	—	—	—	—	—	—
	55 to 64	—	—	—	—	—	—
Male	65 to 74	—	—	—	—	—	—
	75 to 84	—	—	—	—	—	—
Female	65 to 74	—	—	—	—	—	—
	75 to 84	—	—	—	—	—	—
Total	65 to 74	—	—	—	—	—	—
	75 to 84	—	—	—	—	—	—
Male	85 and over	—	—	—	—	—	—
	Total	—	—	—	—	—	—
Female	85 and over	—	—	—	—	—	—
	Total	—	—	—	—	—	—
Total	85 and over	—	—	—	—	—	—
	Total	—	—	—	—	—	—

**TABLE IV.—TREATMENT OF DEFECTS OF CHILDREN  
DURING 1920.**

**A.—TREATMENT OF MINOR AILMENTS.**

<i>Disease or Defect.</i>	<i>Number of Children.</i>						
	<i>Treated.</i>						
	<i>Referred for Treatment.</i>	<i>Under Local Authorities (Education) Scheme.</i>		<i>Otherwise.</i>		<i>Total.</i>	
Skin :—							
Ringworm—Head .. ..	68	49	9	..	..	58	
Do. Body .. ..	59	31	3	..	..	34	
Scabies .. ..	168	157	7	..	..	164	
Impetigo .. ..	259	208	24	..	..	232	
Minor Injuries .. ..	7	3	2	..	..	5	
Other Skin Disease .. ..	70	51	8	..	..	59	
Ear Disease .. ..	140	29	28	..	..	57	
Eye Disease (External and other) .. ..	203	96	34	..	..	130	
Miscellaneous .. ..	104	67	26	..	..	93	
	1078	691	141	..	..	832	

**B.—TREATMENT OF VISUAL DEFECTS.**

Referred for Refraction .. ..	531
Submitted to Refraction :—	
Under Local Education Authorities Scheme Clinic or Hospital ..	207
By Private Practitioner or Hospital .. ..	55
Otherwise .. ..	60
Total .. ..	322
For whom glasses were prescribed .. ..	301
For whom glasses were provided .. ..	312
Recommended for treatment other than glasses .. ..	16
Received other forms of treatment .. ..	21
For whom no treatment was considered necessary .. ..	6

**C.—TREATMENT OF DEFECTS OF NOSE AND THROAT.**

Referred for Treatment .. ..	576
Received Operative Treatment :—	
Under Local Education Authorities Scheme—Clinic or Hospital ..	—
By Private Practitioner or Hospital .. ..	101
Total .. ..	101
Received other forms of Treatment .. ..	30

TABLE V.—SUMMARY OF TREATMENT OF DEFECTS AS SHOWN  
IN TABLE IV. (A., B., C.).

<i>Disease or Defect.</i>	<i>Number of Children.</i>							
	<i>Treated.</i>							
	<i>Referred for Treatment</i>		<i>Under Local Education Authorities Scheme.</i>		<i>Otherwise.</i>		<i>Total.</i>	
Minor Ailments .. ..	1076	693	141	.	834			
Visual Defects .. ..	531	216	104	..	320			
Defects of Nose and Throat	576	—	117	..	117			
Dental Defects .. ..	61	—	19	..	19			
Other Defects .. ..	737	287	120	..	407			
Total .. ..	2981	1196	501	..	1697			

TABLE VI.—SUMMARY RELATING TO CHILDREN MEDICALLY  
INSPECTED AT THE ROUTINE INSPECTIONS DURING THE  
YEAR 1920.

(1) The total number of children medically inspected at the Routine Inspections .. .. .	8879
(2) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing, foot-gear) who require to be kept under observation (but not referred for treatment).. ..	1864
(3) The number of children in (1) suffering from :—	
Malnutrition .. .. .	232
Skin Disease .. .. .	342
Defective Vision (including Squint) .. .. .	670
Eye Disease .. .. .	187
Defective Hearing .. .. .	52
Ear Disease .. .. .	46
Nose and Throat Disease .. .. .	969
Enlarged Cervical Glands (Non-tubercular) .. .. .	157
Defective Speech .. .. .	46
Dental Disease .. .. .	150
Heart Disease : Organic .. .. .	82
Do. Functional .. .. .	273
Anæmia .. .. .	153
Lung Disease (Non-tubercular) .. .. .	429
Tuberculosis :—	
Pulmonary : Definite .. .. .	23
Do. Suspected .. .. .	81
Non-Pulmonary .. .. .	22
Disease of the Nervous System .. .. .	39
Deformities .. .. .	139
Other Defects and Diseases .. .. .	131
(4) The number of children in (1) who were referred for treatment (ex- cluding uncleanliness, defective clothing, etc.) .. .. .	1554
(5) The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.) .. ..	

# Cumberland County Council.

EDUCATION (MEDICAL) DEPARTMENT.

## *APPENDIX B.*

### Report

ON THE

### Medical Inspection and Treatment

In Secondary, Aided and Technical Schools  
during 1920.

\* Excluding Whitehaven Secondary School.

BY

Kenneth Fraser, M.D., D.P.H.,

Deputy School Medical Officer.

## TO THE CHIEF SCHOOL MEDICAL OFFICER.

Sir,

I beg to submit my Report on the Medical Inspection and Treatment of the children in Secondary, Aided, and Technical Schools of the County (excluding Whitehaven Secondary School), during 1920.

## SCOPE OF THE INSPECTION.

Every child in the Secondary and other schools visited, *i.e.*, Alston Samuel King's, Brampton Secondary, Carlisle and County High (County Children), Carlisle Grammar (County Children), Keswick High, Penrith Secondary, Millom Secondary, Workington Secondary and Technical, Wigton Nelson, and Wigton Thomlinson's, was examined at least once during the year, with the exception of a negligible number who were absent, or whose parents objected.

It was considered that during this, the first year of Medical Inspection of Secondary Schools in the County, the selection of age groups was undesirable, and that a better understanding of the problem could be arrived at by examining every scholar in every school. The total number of children thus examined was 1,464.

The examination was very severe, all children being examined stripped to the waist, and the slightest defect was recorded. Thus any child with one defective tooth was recorded as defective, and referred for treatment. I can see no justification for conducting the examination on any lower standard; physical perfection and nothing less is the standard to set. A surprisingly high number of children—369—had no defects of any kind.

Defects, when found, were notified to the parents by means of personal letters. After a lapse of say three months the schools were revisited, and children with defects re-examined to determine the progress of treatment. Children with unremedied defects were noted, and their parents again written to. A third visit was paid later to nearly every school to review the unremedied defects, and to this revisit the parents of children with unremedied defects were invited. The total number of re-examinations was 1,393.

The Board of Education Schedule issued during the year was not utilised as a considerable proportion of the children had been examined before the Schedule was received.

## SPECIAL FEATURES OF MEDICAL INSPECTION IN SECONDARY SCHOOLS.

No one accustomed to the Medical Inspection of Elementary School Children can fail to appreciate the need for an alteration of outlook in approaching the work in Secondary Schools. The work is

much easier and more satisfactory largely because the children themselves have arrived at an age when they can appreciate the value of physical fitness, and its relationship to their future profession; they are interested in defects pointed out to them, and anxious to have these remedied. It is easy, for example, to demonstrate to children who intend to study at college for some profession after leaving school, the handicap that uncorrected defective eyesight will impose on them, and to enlist their co-operation in getting the defect remedied.

Then there is the fact that the children are working under totally different conditions from those which prevail in the elementary schools. Very large numbers of the children travel daily to School from long distances by train or cycle, or on foot. The school hours are longer, and the questions of home work and of preparation for examinations, in some cases calling for prolonged study at high pressure, are introduced. I note that the Model Schedule issued by the Board includes one heading "Signs of Overstrain" for the remarks of the Medical Officer in the case of every child. It is a most valuable heading, perhaps the most valuable suggestion in the Schedule, because so easily overlooked. It is gratifying to be able to say that I found a progressive improvement in the physical condition and general health of the children among the higher forms. That is to say, in spite of the physical and mental strain of travelling long distances, increasing pressure of home-work, examinations, etc., physical fitness is most marked among the older children.

I have no doubt that the years spent in the Secondary Schools are of the utmost physical as well as mental benefit to the children. I attribute this to the high standard of personal hygiene which is maintained in most of these schools, in, for example, the case of the teeth, to the excellent mid-day dinners which are provided at all these schools (with one exception), to the organised games and physical training, and to the careful supervision of home-work. The balance between work and play is very well adjusted.

A number of parents in one area having complained that the travelling and home-work were prejudicially affecting their children's health, I made a careful comparison, at the request of the headmaster between the children living locally, and those travelling from a distance.

The numbers examined were very considerable, and the comparison was made without my knowing which children belonged to which group. I found that there were fewer defects—such as bloodlessness, debility, lung weakness, etc.—which might be attributed in whole or in part to overstrain, among those who travelled from a distance of seven or eight miles daily, than among the local children.

On the subject of home-work full information was supplied to me from each school as to the amount of home-work set for each form, and as to how it is supervised.

Speaking generally the daily home-work varies from 30 minutes in the lowest form, to two hours in the highest. The work is not, as a rule, strenuous, and often consists of copying notes, map-making, and the like. Frequently part of the "home" work is done in school, and in several schools it is reduced during the summer months.

At the Workington Secondary School the amount of home-work is posted in each classroom, and each child has a diary in which is entered the time allotted to each home-work lesson; the boy or girl enters the time actually taken each night, and this diary is initialled weekly by the parent and by the form teacher. These diaries are personally supervised by the Headmaster.

Such a system is obviously satisfactory, and similar systems of control are in vogue in other of the Secondary Schools.

I have gone into some detail in the matter because parents constantly complain that the health of their children suffers on account of excessive home-work. In some half-dozen cases I recommended a reduction or cessation of home-work, but, in the main, I am satisfied that these complaints are not justified.

#### DEFECTS FOUND AND TREATMENT OBTAINED.

TABLE I.

General Statement of the numbers examined, of the defects found, and of treatment obtained.

(*Excluding Whitehaven Secondary School*).

Number of children examined	..	..	..	..	1464
Number of re-examinations..	..	..	..	..	1393
Children with no defects	..	..	..	..	369
Number of children with defects referred for treatment					990
Left or absent at the re-visit	..	..	..	..	142
Children with all defects remedied		..	..	..	252
Children with some defects remedied or treated	..		..	..	343
Promised to obtain treatment	..	..	..	..	154
Refused	..	..	..	..	4
Entirely untreated	..	..	..	..	95
Total number of defects referred for treatment	..			..	1375
Total number of defects treated or partially treated	..			..	738

The total number of defects untraceable owing to the children being absent or having left at the time of the re-visit was 197. The following, therefore, shows the treatment of the traceable defects:—

Total number of defects referred for treatment and subsequently traced	..	..	..	..	1178
Remedied	..	..	..	..	475
Partially treated	..	..	..	..	263

TABLE II.

## DETAILED STATEMENT OF DEFECTS AND TREATMENT.

DEFECTS.	<i>Referred for Treatment.</i>	<i>Referred for Observation.</i>	<i>Treated.</i>	<i>Partly Treated.</i>	<i>Promised to obtain Treatment.</i>	<i>Refused.</i>	<i>Untreated.</i>	<i>Left or Absent at Re-visits.</i>
Defective Teeth ..	689 ..	4 ..	179 ..	164 ..	175 ..	2 ..	60 ..	106
Very Defective Teeth	111 ..	— ..	18 ..	19 ..	27 ..	— ..	27 ..	20
Cleanliness ..	16 ..	— ..	10 ..	4 ..	— ..	— ..	1 ..	2
Malnutrition ..	1 ..	— ..	1 ..	— ..	— ..	— ..	— ..	—
Pulmonary Tubercu- losis ..	1 ..	— ..	1 ..	— ..	— ..	— ..	— ..	—
Pretubercular ..	4 ..	— ..	1 ..	2 ..	— ..	— ..	1 ..	—
Bronchitis and Weak Chest ..	14 ..	104 ..	11 ..	— ..	— ..	— ..	— ..	3
Organic Heart Disease ..	28 ..	28 ..	21 ..	3 ..	— ..	— ..	— ..	4
Functional Heart Disease ..	48 ..	53 ..	23 ..	6 ..	4 ..	— ..	5 ..	10
Anæmia ..	52 ..	2 ..	30 ..	7 ..	5 ..	— ..	4 ..	6
Defective Vision ..	157 ..	29 ..	104 ..	3 ..	7 ..	2 ..	24 ..	17
External Eye Disease	13 ..	— ..	12 ..	1 ..	— ..	— ..	— ..	—
Otorrhœa ..	21 ..	4 ..	10 ..	5 ..	2 ..	— ..	— ..	4
Defective Hearing ..	21 ..	11 ..	13 ..	4 ..	— ..	— ..	2 ..	2
Tonsils ..	13 ..	14 ..	5 ..	1 ..	— ..	1 ..	4 ..	2
Adenoids ..	6 ..	7 ..	2 ..	2 ..	2 ..	— ..	— ..	—
Tonsils & Adenoids	9 ..	2 ..	5 ..	— ..	1 ..	1 ..	2 ..	—
Nasal Obstruction ..	5 ..	— ..	4 ..	— ..	— ..	— ..	— ..	1
Non-pulmonary Tuberculosis ..	5 ..	1 ..	4 ..	— ..	— ..	— ..	— ..	1
Spinal and Other Deformities ..	141 ..	16 ..	4 ..	39 ..	1 ..	— ..	80 ..	19
Nervous Diseases ..	1 ..	3 ..	1 ..	— ..	— ..	— ..	— ..	—
Impetigo ..	3 ..	— ..	3 ..	— ..	— ..	— ..	— ..	—
Scabies ..	5 ..	— ..	4 ..	1 ..	— ..	— ..	— ..	—
Other Defects ..	12 ..	26 ..	9 ..	2 ..	— ..	— ..	— ..	1
Totals ..	1375 ..	304 ..	475 ..	263 ..	224 ..	6 ..	210 ..	197

The above tables give a complete statement of the classified defects, and of the treatment obtained. It is not necessary to elaborate the facts contained in the tables to any extent. The number of children with defective teeth is of course very large, and as will be seen 111 children had teeth so bad as to preclude the possibility of their being in a fit state of health. I am satisfied that more good will be done by pressing for efficient dental treatment in these cases, than will be accomplished in all the other classes of defects put together.

The difficulty is the absence of qualified dentists in some areas, and in these areas the services of the School Dental Officer will be invaluable. A large number of children will require extractions of all their teeth, and the provision of dentures in necessitous cases (of which there are a number) is a matter for early consideration.

With regard to "cleanliness," only one case of actual vermin was met with during the inspections. This was the case of a boy, grossly neglected, whose body was verminous, at Brampton Secondary School. The standard of hygiene at this School is very high, and the mother was warned that, if the neglect continued, the boy would be struck off the roll in fairness to the other children.

As regards defective vision, there are a considerable number of cases of extremely serious eye defects, and one or two are threatened with blindness. All of these have been referred to and seen by eye specialists in Carlisle or outside the County. In all sixty-two cases have been treated under the Local Authority's Scheme; the remaining forty-five treated have been treated privately.

The importance of correcting visual defects is now generally recognised by the parents, but I was astonished to find one girl wearing her father's spectacles in the belief that, being good enough for him, they were good enough for her.

As regards defects of the ear, nose and throat, fourteen of the more serious have been seen by an ear, nose and throat specialist in Carlisle, under the Local Authority's Scheme. The majority of these have been operated upon. More would have been dealt with had the arrangements been concluded earlier, but the remaining cases are now in hand. It is remarkable that more cases of deafness, running ears and the like are to be found attending the Wigton Secondary Schools, than in all the rest of the County. This area is, I believe, also the area with the highest percentage of tonsils and adenoids among the elementary school children, so that the cause of these ear conditions is not far to seek.

The number of cases of spinal and other deformities is large, and many of these have reached the incurable stage. The Penrith Secondary School provides by far the greater number of these serious deformities.

Three cases of special interest were met with during the year; the first was a case of patent ductus arteriosus, the second of lupus, and the third a case in which congenital syphilis was suspected, and in which the diagnosis was confirmed on Wassermann examination.

The number of defects treated has been most satisfactory. The full position is made clear in the accompanying tables. With reference to the headings, it may be pointed out that the heading "Partly Treated or Partly Remedied" has been used for all defects not finally

disposed of. Thus, for example, a child with defective teeth might have had five extractions and four fillings, but if one tooth remained defective it was still classified as only partly treated. In other words the treatment obtained might easily have been shown in a more favourable light, and "Partly Treated" represents in many cases a great deal done. It will be noted that out of 1,178 defects which were subsequently traced, 738 were wholly or partially remedied. No doubt many of those untraced, in children who had left or were absent at revisits, had also been treated.

There are two unsatisfactory features in the treatment table. The first is the failure to obtain treatment in the worst cases of dental defects. As has been pointed out before there are some 110 such cases, of whom only 37 were treated in whole or part, and in all these 110 cases treatment is urgently required. I attribute the failure to obtain treatment in these cases chiefly to the fact that the parents of these children are deliberately negligent in the matter; in fact none but careless parents would allow their children's mouths to get into such a condition, and, therefore, one is dealing with a particularly difficult type of parent. In a few cases lack of means may be the explanation, but it must be remembered that these cases show prolonged neglect dating back to long before the period of financial stringency.

The second unsatisfactory feature is the treatment of spinal curvatures and other deformities.

A reference to the tables will show that there are a large number of these cases, mostly in the remediable stage. On the other hand there are a number of cases presenting an altogether deplorable degree of fixed deformity—deplorable because practically all deformities are amenable to early and efficient treatment. A number of the cases now curable are rapidly reaching the incurable stage.

The facilities for treatment are as follows:—

*Millom.—Keswick.*—Treated at the School Clinic by a member of the physical training staff.

*Alston.—Brampton.—Wigton Thomlinson's.*—Have had no treatment during 1920 on account of a vacancy in the physical training staff.

When the vacancy is filled, the cases at the Wigton Thomlinson's School will be treated at the Wigton School Clinic, at the other Schools in the gymnasium, with such remedial apparatus as is available.

*Wigton Nelson.*—Will be treated at the Wigton School Clinic.

\* *Carlisle and County High.*—A certain number of the worst cases have received treatment once a week in the gymnasium.

\* *Workington Secondary.*—Cases treated once a week or once a fortnight in the gymnasium, more serious cases taken more frequently if possible.

*\*Penrith Grammar.*—No arrangements. This is particularly to be regretted because there is a fully qualified instructress trained at Madame Osterberg's College on the Staff. There are, as has been noted, an unusually large number of cases for treatment at this school; arrangements could easily be made for the use of the apparatus at the school clinic for these cases, by the instructress.

*Carlisle Grammar.*—Cases can be treated at the remedial clinic in the Health Offices when it is equipped.

\* These Schools have whole time teachers of physical training on their staff.

I admit the difficulties in putting this matter on a basis. Even where there is a whole time physical training teacher on the staff, qualified for remedial work, there remains the difficulty of finding time either as regards the teacher or the children concerned for this treatment. The time of the former is usually fully occupied with physical training and supervision of games. The time of the latter is fully occupied with the ordinary lessons, and perhaps with preparation for examinations. Further, where the treatment takes place in the gymnasium, the difficulty arises that the gymnasium is frequently used as a classroom or passage way, and this in mixed schools especially is very inconvenient. When the treatment takes place at one of the County School Clinics considerable time is taken up in getting to and from the clinic, over and above the actual treatment time.

Nevertheless, with the exception of the arrangements at Millom and Keswick, the treatment of these cases during the year has been quite inadequate, both as regards the time devoted and the treatment given. The staff is not there, and in many cases the apparatus is not there. Treatment to be of any use requires at least two periods weekly with proper apparatus, that is apparatus additional to the ordinary gymnasium equipment.

Apart, however, from these two unsatisfactory points, the treatment obtained during the year has been a matter for congratulation. It has not only covered a very large proportion of the defects, but has also covered a wide field. It has ranged from operative treatment for antrum disease, to injections of salvarsan substitute, from X-Ray treatment for lupus, to the operative treatment of cripples.

It is noteworthy, too, that only in six cases out of 1,375 defects referred for treatment have the parents raised any objection to obtaining treatment. It is true that a considerable number remained untreated at the end of the year, but in practically every case the parents promised to have the defects remedied, and I am satisfied that by the end of 1921 few, if any, of the defects referred during 1920 will remain unremedied. It must be remembered that the period under review has been one of great financial difficulty, and I am sure that this has had a considerable bearing on the matter.

In one case, where neglect has been gross and persistent, and where the serious defects are completely undermining the health of the child, I have warned the parents that if the neglect continues I will refer the matter to the National Society for the Prevention of Cruelty to Children.

#### PAYMENT FOR TREATMENT.

It may be desirable, in view of the recent letter from the Board, and of future developments of treatment, to refer to this matter.

The great majority of the defects treated have been treated privately, but a considerable number of eye, and ear, nose, and throat defects have been treated under the Local Authority's Schemes. In addition, a fair number of children have been treated at the remedial clinics, and with a staff up to strength this number would be much increased.

It is probable, too, that in the near future some dental work will have to be undertaken by the School Dental Officer in areas unprovided with qualified dentists, and one or two children will have to be sent away for hospital treatment in cripple hospitals. Some children will probably be dealt with at the infirmaries and cottage hospitals of the County for the operative treatment of tonsils and adenoids, or at the Cumberland Infirmary as in-patients for the treatment of acute eye conditions.

So far as cases referred to the eye, and ear, nose, and throat specialists are concerned, the parents have in the great majority of cases been able and willing to pay all the expenses, and I do not think the present system, which is working smoothly, need be altered in any way.

As regards children treated at hospitals for crippling, tonsils and adenoids, and eye defects, the number will not be large, and I suggest that the parents be asked, where their means allow, to refund the cost to the authority. The number will be small enough to allow of each case being considered on its merits.

It would, I think, however, be very desirable to obtain the ruling of the Committee on the question of the payment of fees by parents in cases which are treated by the School Dental Officer, and in cases obtaining remedial treatment from members of the Physical Training Staff. The number of cases in both of these groups will be considerable.

From close contact with very many parents during 1920, and with a full knowledge of the treatment obtained during the past year, I have no hesitation in saying that the majority of parents are able to pay reasonable fees, and much prefer to do so rather than to obtain free treatment.

It may be helpful to make definite suggestions on these two groups cases.

I would, therefore, suggest as regards :—

(a) *Dental Cases.*

That the following fees be charged, except in necessitous cases.

For extractions.—one shilling per extraction, plus the anæsthetists fee of one guinea in cases where an anæsthetist is required.

For Fillings.—Two shillings and sixpence per filling.

For Dentures.—That cases be dealt with individually at the discretion of the School Medical Officer.

(b) *Remedial Cases.*

That all cases sufficiently advanced to require *individual* treatment be charged a fee corresponding to that charged for special subjects, *e.g.*, music. If no fixed fee exists, that the fee be £1 per term. The above scale to refer to cases treated either by the County Physical Training Staff, or trained members of School staff in cases where these latter receive special remuneration for this work.

Early cases suitable for treatment in groups might be treated free.

#### PHYSICAL TRAINING AND GAMES.

It has not been possible, owing to the general pressure of work, to give more than superficial attention to the matter of physical training and games.

In theory the provision is as follows :—

\* *Alston Samuel King's*.—\* *Brampton Secondary*.—*Keswick High* —*Millom Secondary*.—\* *Wigton Thomlinson's*.—Members of the County Physical Training Staff attend on a certain number of days weekly.

*Carlisle and County High*.—*Penrith Grammar*.—*Workington County Secondary and Technical*.—Have each a fully qualified Teacher of Physical Training on the Staff.

In addition :—

*Carlisle Grammar* has an Ex-Army instructor.

*Wigton Nelson*.—Physical drill is taken by two of the Masters who are interested in this work.

*Alston Samuel King's*.—The boys are under the care of one of the Masters experienced in army drill.

*Keswick High*.—The same remarks apply.

\* With regard to these Schools it may be pointed out that, owing to a vacancy on the physical training staff, no qualified instructress has attended since Easter, 1920.

The lack of instruction, especially in apparatus work, has been greatly missed in these schools, and while the difficulties in the matter are appreciated, it would, I think, be very desirable that, in the event of a prolonged vacancy again occurring (a quite probable contingency), arrangements should be made to share more equally the services of such members of the Physical Training Staff as are available among the Schools concerned. Up till Easter, 1921, the vacancy had not been filled, and, therefore, during a period of twelve months, certain schools have had their normal proportion of instruction in physical training, while others have had none at all.

With regard to the boys in most of the schools, the physical drill is taken by members of the staff experienced in army physical drill. I do not think that sufficient advantage has hitherto been taken by the Headmasters, generally speaking, of the advice and experience of the Chief (Man) Organiser to improve the standard of physical training among the boys. The boys are mostly of an age when they will benefit very greatly by a high standard of physical training, and the value of the advice in this matter of a trained expert is obvious.

The comments of the Head of one school on the matter of expert supervision are pertinent :—" The ordinary form mistress in a Secondary School is usually quite unfit by training and experience to take growing girls in the apparatus work, which is identified with any of the modern systems of physical culture, and although most mistresses are willing, almost to a pathetic extent, it is practically certain that, in work demanding the highest technical knowledge and skill, a teacher deficient in these qualities will do more harm than good.

I am strongly of opinion that the games of the girls should be supervised by a physical drill mistress. It is only an exceptional type of form mistress who is constitutionally good at games."

There does not appear to be any uniformity in the matter, but usually two periods are allotted in the curriculum of each class to physical training weekly. These periods vary from thirty-five to forty-five minutes. Apparently in some cases only one period is so set aside.

With regard to games, these are in most cases compulsory, usually cricket and football for boys, and hockey, tennis and net ball for girls. The games are usually compulsory in school hours, supplemented by voluntary practices out of school hours. Usually also the girls are taught dancing.

In most schools the schools are divided into houses, and inter-house matches are played ; at Workington the interest of the school in these matches is maintained by large diagrams hung in a conspicuous place, representing ladders with boys and girls in the different house colours climbing the ladders—the figures representing each house being placed on the ladders in positions corresponding to the successes of the boys and girls of the teams of the house concerned in these inter-house contests—an excellent method of maintaining interest.

In addition to these inter-house matches some inter-school matches are played.

*The disparity in numbers is a difficulty, but it would be a splendid method of fostering the pride of the children in their respective schools if inter-school competitions in games, physical drill and sports for a County Shield could be organised.*

One or two schools have opportunities for other recreation. Wigton Thomlinson girls have swimming in the Public Baths; at Talkin Tarn the Brampton children learn swimming and many are members of the Rowing Club. At Brampton also the school is open during the Autumn and Spring Terms as a Social Club; girls attend on one night for dancing, singing, etc., and boys on another night for boxing, fencing, and so on.

#### BUILDINGS.

I have little to say about the buildings, which I had not time to inspect in any detail. Several of the schools are practically beyond criticism, and in the remainder the work can be carried on very fairly satisfactorily until conditions are more stabilised. One or two comments, however, may be of value. The main difficulty is, of course, insufficient accommodation, so that gymnasias, laboratories, workshops, and so on have to serve as classrooms.

It is obvious that extensions cannot be delayed for very long, and in this connection I beg to make certain suggestions. Any scheme of extensions should include provision for a room of about twenty feet square to serve as a combined medical inspection, treatment, and isolation room.

In most schools I have examined the children in a classroom, the usual staff rooms being too small for eye testing, etc. In one school I must have occupied a classroom for nearly four weeks during the year, and in others for shorter periods. The inconvenience caused in an already over-crowded school on this account is obvious, and I have been under a great obligation to the Headmasters and Head Mistresses of the Schools for providing the necessary accommodation so willingly, frequently under circumstances of great difficulty.

Such a room as suggested would also allow of dental and remedial treatment being carried out under good conditions, at a moderate outlay, where no School Clinic buildings are available, and would also provide a room for the isolation of suspected infectious cases, and where cases of sudden illness (of which there are quite a number) could wait till train time.

I think that in some schools increase of cloakroom and lavatory accommodation has hardly kept place with other extensions, and a good feature to include in extensions would be shower baths.

With reference to gymnasium accommodation, one gymnasium is hardly adequate for more than 250—300 children, and the question of a smaller supplementary gymnasium in schools where the position applies might be considered.

Apart from these general points, there are one or two points at individual schools which call for comment, and are really worthy of early attention. They are matters of importance capable of being easily remedied at small cost.

*Wigton Nelson.*

The cloakroom is overcrowded and badly ventilated, and in consequence, has usually a bad smell. Several of the new classrooms are badly lighted.

*Brampton.*

The boys' cloakroom is badly lighted and ventilated.

In this school the provision of more desks would remove the necessity of using the laboratory, which is absolutely unsuitable, as a classroom.

In general, the cloakrooms are over-crowded at most of the Schools, and many are not well ventilated or provided with any means of drying the wet clothes, which is important in the case of children coming from long distances.

#### THE CASE FOR A PRELIMINARY MEDICAL EXAMINATION.

If any one thing has impressed me more than another during the year's work (as regards Secondary Schools) it is that a medical examination *before admission* is extremely desirable, and I would earnestly beg that this matter should be considered by the Committee. The places in these Secondary Schools are valuable, very valuable, and I regret to say there are a number of children filling places who are quite unfit to benefit by the educational facilities provided. There are, for example, some cases practically stone deaf, others with extremely defective eyesight, or other conditions of such a nature as to make their school attendance of little value. In addition, very large numbers of the children were found, as has been pointed out, to have defects which materially reduce the efficiency of their work; these defects, however, are of the most part amenable to treatment. A preliminary medical examination of all children, fee-paying or otherwise, before admission to the Secondary Schools, would prevent places being filled by children unable to benefit by Higher Education. It would also reveal the presence of curable defects among a large proportion of the children, and a time limit of, say, three months or six months, might be allowed to parents to have these defects remedied, it being understood that the various treatment schemes of the Authority were available for free treatment in necessitous cases. At the end of the period fixed the School Medical Officer would report to the Committee cases where parents had failed to obtain treatment, and the child's place in the school, whether free or not, would be liable to forfeiture.

The whole matter is closely bound up with the medical examination of bursars, pupil teachers, minor scholars, etc. During my examinations of these in the past two years I have found that many parents are so grossly and persistently negligent that, unless pressure can be brought to bear, the whole question of the medical examination threatens to degenerate into a farce. Cases with gross defects have dragged on untreated for twelve months. With your approval I have started a register of these examinations of bursars and others, which demonstrates clearly the colossal waste of time involved in compelling many parents to obtain the simplest treatment. I doubt if it is generally realised that one finds many parents complacently proposing to send their children into the teaching profession, either through College or not as the case may be, with running ears, with their mouths full of abscesses, with vision so defective as to be half blind, and with many other classes of defects, without the slightest intention of having these defects remedied even when they are pointed out.

No doubt the year's work has cleared up many of these cases, but a further resolution of the Committee making the holding of scholarships, bursaries, etc., conditional on the recommendations of the School Medical Officer in each case being carried out *within a time limit* would be invaluable.

One infers from one's observations, that many teachers must have joined the teaching staff of the County in the past liable to *avoidable* ill-health on account of unremedied defects. Such a position is unfair to the Local Education Authority, and to the Headmasters or Head Mistresses of the Schools to which they ultimately are attached, and it should be possible to prevent this in the future.

#### CONCLUSION.

A few minor matters may be referred to. During the year a small number of special cases were brought to the notice of the Committee in which grants towards free dinners, clothing or residence in hostels were recommended. One boy, threatened with pulmonary tuberculosis, was referred to the local Tuberculosis Officer for observation at the dispensary; in one similar case a shelter for open-air treatment was supplied. One boy died during the year of appendicitis.

It is superfluous to say that the success of the work in any school depends on the degree of co-operation between the Medical Officer and the Head of the School. I have been very grateful for the help and co-operation of the Headmasters and Head Mistresses. Naturally this help has varied considerably, but the large amount of treatment obtained has been the direct result of the influence of the Heads of the various schools in impressing upon the children the need for treatment.

I hope this co-operation will become increasingly close; if it does the work will show increasingly satisfactory results.

I believe the future will justify the inconvenience which inevitably attaches to the work of medical inspection in disturbing the normal routine of the Schools.

The Headmaster of one school remarks:—"The work of the Medical Officers . . . . . is of incalculable value and guidance to the Headmaster or Head Mistress of a School." That it can be so is, I think, beyond question, and the value depends, in my opinion, entirely on the efficiency of co-operation.

I am, Sir,

Your obedient Servant,

KENNETH FRASER,

*Deputy School Medical Officer.*



# Cumberland County Council.

EDUCATION (MEDICAL) DEPARTMENT.

## *APPENDIX C.*

### Report

ON THE

### Medical Inspection and Treatment

Of Whitehaven County Secondary School  
during 1920.

BY

G. Bertram Muriel, M.B., B.C., Cantab.,  
M.R.C.S., Eng., L.R.C.P., London.

Cumberland County Council

EDUCATION AND MEDICAL DEPARTMENT

4298/217-5

Report

on the

Medical Inspection and

Treatment

Of Whitehaven County Secondary School

during 1930

G. Herbert Maudslayi, M.B., D.O., Cantab.

M.R.C.S., Eng., L.R.C.P., London.

# REPORT ON MEDICAL EXAMINATION OF WHITEHAVEN COUNTY SECONDARY SCHOOL FOR 1920.

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During the year 1920 I have examined no less than 338 pupils, some of them more than once.

In making my examination I have been particularly critical over the points of most importance for children of school age, namely, with regard to physique, eyesight, tonsils, and the like.

## EYESIGHT.

No fewer than 74 were found to have defective vision of some sort. Several of these had some other trouble in addition, mostly some weakness in development, *e.g.*, round-shouldered, spinal curvature, etc.

Many of these errors of refraction are already corrected by lenses, and many are only slight. It is, however, necessary that even slight errors should be noted and, if possible, corrected.

## TONSILS.

Seventy-five pupils have enlarged tonsils and adenoids in greater or less degree. Many do not necessarily need removal, but it is important that they should be noted so that it can be observed whether or not they grow, or give rise to other deleterious symptoms. The enlarged tonsils and the eyesight errors already mentioned account for a considerable number of the cases I have recorded as needing

## PHYSICAL DRILL.

Seventy-two need this drill. I was glad to note much improvement in many cases in general development due, I have no doubt, to the Physical Drill which they have undergone.

Another matter which I was glad to note was that there seemed to be a marked improvement in the physique and bearing of the pupils as they advanced in years. Several whom I had not examined for some considerable time were now well built.

In discussing physique it would seem opportune to refer to the cases who have been undergoing "remedial treatment." In doing so it is, of course, impossible to give statistics, and one can only report by means of comparison. I have no doubt, however, as to the improvement which has taken place, though most of the cases still need treatment. To obtain the maximum benefit I am afraid much more time would have to be devoted to the purpose by those in charge. This would probably be difficult in many respects, especially when one remembers that every pupil is bound to have a certain amount of physical drill.

I was very much struck by the large number of cases of Goitre in the school, finding no fewer than 27 cases out of the 338 having evidence of same, mostly to a small degree only.

I hope to keep an eye on these cases, and further investigate them to try and find out what is their cause.

#### HEART.

There were 19 cases of Heart trouble in some shape or form; most were functional or due to over-exertion, and only very few due to what is looked upon as actual "heart disease."

These have, of course, been warned against games altogether. One of these cases due to overstrain showed the importance of such examinations as are being carried out. (A boy when examined a term or two ago was discovered to have an enlarged heart. He was re-examined this year when the heart was found to have recovered. By accident he re-appeared for examination again in two or three days, and his heart was found to be enlarged again. On questioning the boy it was found he had just previously been taking violent exercise.)

#### LUNGS.

Eight cases were found to have a condition of the lungs which needed very careful watching, one of whom I have specially reported, whom I have advised to seek medical advice.

Two other cases seem to be losing weight and, therefore, need careful supervision.

#### TEETH.

Twenty-six cases are noted as needing the attention of their dentist, and I am afraid this does not cover the whole of the dental cases.

#### HEARING.

One case of marked deficiency in hearing was to be noted due, apparently, to the ear trouble itself, *i.e.*, not to the presence of an ordinary nasal catarrh, or enlarged tonsils and adenoids.

G. BERTRAM MURIEL, M.B., B.C.,  
Cantab.; M.R.C.S. Eng.;  
L.R.C.P., Lond

*February 22nd, 1921.*

## APPENDIX D.

REPORT ON PHYSICAL TRAINING FOR THE YEAR ENDING  
31ST DECEMBER, 1920, BY MISS G. T. SPENCER,  
ORGANISER.

## 1.—STAFF.

During the year ending 31st December, 1920, it has been found impossible to bring the Physical Training Staff (Women) up to the authorised establishment of one chief organiser, five assistant organisers, and two instructresses.

During the year Miss Copland (Penrith District) reported for duty on January 13th, but after a very brief period of work, was granted three months leave of absence owing to illhealth, and finally resigned on 13th May. Miss Wightman, Assistant Organiser (Carlisle District), resigned, and left on 21st May. Miss Moulson, Bedford Physical Training College, (Cleator Moor District); and Miss MacLaren, Madame Osterberg's Physical Training College, (Penrith district), were appointed Assistant Organisers during the year, and commenced duties on 1st September, and 1st October respectively.

The staff, therefore, for the greater part of the year was very much below strength, and averaged little more than 50% of the authorised establishment. The net result of this shortage has been that as in 1919, the Organisers have had to devote a considerable amount of time to duties other than organising in the shape of teaching in the Secondary Schools and Remedial Clinic work. For example, Miss Wightman, the Assistant Organiser for the Carlisle district, had to devote practically all her time from January to May to teaching in the Alston and Brampton Secondary Schools and Thomlinson Girls' School at Wigton.

The organising in the Carlisle district has been undertaken during the year by the Chief Organiser, and no attempt has been made to fill the vacancy for the Assistant Organiser in that district for reasons of economy.

## 2.—GENERAL SUMMARY OF WORK.

During the year the general organisation of the work has continued on the same lines as 1919.

- (A) Organising in Elementary Schools (including Teachers' Classes).
- (B) Teaching in Secondary Schools.
- (C) Remedial Treatment.

With regard to (A) during the year 638 visits have been paid to Elementary Schools, and every School in the County has been visited and re-visited, with the exception of a number of Schools in the Carlisle district, as in this area the Chief Organiser was only able to devote part of her time to visiting Schools.

The publication of the Syllabus of Physical Training, 1919, and two supplementary pamphlets: (1) Physical exercises for children under seven years of age and (2) Suggestions in regard to games, has marked a new era in the branch of Education. It has been instrumental in stimulating the interest *both of the teachers and of the children* in Physical Training, and has unquestionably raised the general standard of the work done throughout the County.

For obvious reasons no sheds have been provided in the School playgrounds during the year, and very little has been done to improve the condition of the playgrounds, therefore the same position prevails as in previous years, that the work of Physical Training is greatly handicapped during the winter months by the lack of suitable accommodation.

A certain amount of progress has been made towards providing playing fields for the Elementary Schools. Playing fields have been provided in a few cases by the resolution of the Committee, and a certain number have in addition been obtained by private arrangement.

#### (A) TEACHERS' CLASSES.

Classes for teachers, based on the Board of Education syllabus, 1919, have been held, as follows:—

No. of Classes.		Centre.		No. of Students on Roll.	
1	..	Penrith	.. ..	..	23
1	..	Maryport	.. ..	..	43
1	..	Millom	.. ..	..	20
2	..	Whitehaven	.. ..	..	44
<hr/> 5				<hr/> 130	
<hr/>				<hr/>	

In addition, preliminary arrangements were made to start Courses at Cleator Moor, Keswick and Carlisle, in January, 1921.

The attendances at these classes have been extremely satisfactory, and the greatest interest has been taken by the teachers in the new Syllabus.

#### (B)—SECONDARY SCHOOLS.

During the year Miss Sproat has continued her whole-time work at Whitehaven Secondary School. Miss Fyfe has taught at the Millom Secondary School, and Miss Wardle at the Keswick School.

Alston and Brampton Secondary Schools, and Thomlinson Girls' School, Wigton, have had no Instructress since Miss Wightman resigned in May, and the lack of a qualified teacher has been very greatly felt in these Schools. Repeated advertisements have failed to provide a suitable applicant for the vacancy.

(C)—REMEDIAL TREATMENT.

The progress in this department recorded in 1919 has been continued in 1920. Remedial Clinic equipment has been installed during the year at the following treatment centres :—Cleator Moor, Cockermouth and Keswick.

Shortage of staff has prevented the opening of the clinics at Cockermouth and Cleator Moor, and has made it impossible to continue remedial treatment at Wigton Clinic, which was opened for two or three weeks early in the year.

The Remedial Clinics which have, therefore, been in full swing throughout the year, have been Penrith, Maryport, and Millom. In addition, the Remedial Clinic at Keswick has been open since November 10th.

The facilities offered at these clinics have been widely taken advantage of, and a total of 1,876 attendances (93 children) was recorded during the year.

At Keswick and Millom the remedial treatment of Secondary School children was also undertaken to some extent.

As in 1919, a considerable number of attendances have been made by children from Rural areas, some of the most regular attenders have come distances from five to fifteen miles to obtain treatment.

During the year a number of children in attendance at these clinics have been admitted to Orthopædic Hospitals for special treatment. The treatment of these children is continued on discharge, and there is no doubt that valuable work has been done in preparatory treatment before admission.

A Remedial Clinic at Carlisle has been authorised to provide for this form of treatment for children requiring it from the large School population in the rural districts around Carlisle.

(D)—EQUIPMENT.

The complete stock of shoes purchased in 1919 has now been sold. The stock was replenished during 1920, and a considerable proportion of the new stock has been sold.

The following equipment for games has been issued to the Girls' and Mixed Schools :—

					<i>Issue.</i>
Net Ball Sets	..	..	..	..	44
Rounders (Bat and Ball)			..	..	14
Jumping Stands	..	..	..	..	11
Footballs	..	..	..	..	51
Cricket Bats	..	..	..	..	57
„ Balls	..	..	..	..	41
„ Wickets	..	..	..	..	46

## APPENDIX E.

REPORT ON PHYSICAL TRAINING BY MR. W. S. GRAY  
(ORGANISER).

*To the Chairman and Members of the Medical Inspection and  
School Attendance Committee.*

MR. CHAIRMAN, LADIES AND GENTLEMEN,

During the year ending 31st December, 1920, I visited 220 Schools, including 142 re-visits. A gradual all round improvement in the work is noticeable, and the old formal work is slowly but steadily disappearing. The new Syllabus, with its "Breaks," Avoidance of Formalities, Competitive Spirit, and healthy introduction of more General Activity Exercises, is brightening up the children, making them more alert and responsive. Teacher and children alike look forward with pleasure to the Physical Training lesson. The Teachers, who for various reasons are unable to attend the Classes of Instruction, are also entering into the spirit of the new Syllabus. They keep a record of the exercises they are not sure of, and refer them to me when I visit the School. Needless to say, an interpretation and illustration of these exercises is most willingly given.

## PLAYING FIELDS.

Seventeen of the Elementary Schools under my jurisdiction have secured playing fields, and eleven are under consideration. Many of the Headmasters anticipate the securing of playing fields in the near future, but so much depends on the sympathy of the owner or tenant that they have to be very diplomatic and patient, therefore progress is rather slow.

## ACCOMMODATION IN THE PLAYGROUND.

Unfortunately, owing to the high prices of building material, etc., the necessary protection for the children doing their Physical Exercises out of doors in Winter seems held up, but I have no doubt that when the Education Committee get an opportunity, they will do their best to provide large, properly floored, well-lighted and ventilated sheds (as recommended by the Board of Education) in the playgrounds, where the lesson could be taken out of doors in practically all kinds of weather.

## INDOOR ACCOMMODATION.

A hall or an empty classroom is necessary if a lesson indoors is to be effective, but few of the Schools have a central hall or spare classroom, therefore, most of the work has to be done in classrooms containing fixed desks. Special attention to this is given at the Teachers' Classes, and tables suitable for a physical training lesson indoors are dealt with.

## SWIMMING.

*Keswick.*—I visited the two Boys' Schools there, and spent half-a-day at each giving demonstrations of Land Drill, which is the best preparation for learning to swim. At both these Schools (weather permitting) the boys are taken to the lake and taught to swim by the Teachers, but owing to the month of July being so wet this year, fewer visits were made than usual.

*Penrith.*—Here at the two Boys' Schools I found both teachers and boys keen on swimming. As the bathing pool is a considerable distance from the town, I submitted a scheme for the Committee's approval, whereby the boys at Penrith will have an opportunity of learning to swim. As at Keswick, the whole success of a scheme for swimming depends on climatic conditions.

*Wigton.*—This is the only district under our Authority where children have proper facilities for being taught swimming. At present the children go to the Baths after School hours, but next Summer the Head Teachers are to make a special effort to have swimming taught during School hours with a teacher in charge. This method would ensure that almost every child would be able to swim before leaving School. By being in classes good discipline would be maintained, which means in this case good behaviour, and a smart re-dressing after being in the bath, therefore avoiding the only danger there is of a chill. Meantime the trouble is the arranging of the Time Table at the Baths. Wigton has already a good reputation for swimming, but I am sure, if arrangements could be made at the Baths for having the children belonging to the Elementary Schools taught swimming during School hours, Wigton's reputation would be further enhanced.

## EQUIPMENT.

List of apparatus distributed from August, 1919, to December, 1920 :

Footballs	..	..	..	..	..	120
Net Balls	..	..	..	..	..	53
Netball Posts and Rings (Sets)	..	..	..	..	..	49
Jumping Stands (Sets)	..	..	..	..	..	20
Rounders	..	..	..	..	..	15
Hockey Sticks	..	..	..	..	..	156
Cricket Apparatus—						
Bats	..	..	..	..	..	83
Balls	..	..	..	..	..	54
Wickets (Sets)	..	..	..	..	..	36

The above apparatus provides a fine stimulus to the games side of Physical Training, and is highly appreciated by both teachers and children.

## EVENING CLASS.

On Friday evening, 8th October, I visited Penrith Evening Class for Physical Training, which is held in the gymnasium of the Grammar School. Good arrangements have been made for this class; the teaching is good, and the students—twenty-nine in number—were very enthusiastic. It is to be hoped that other districts will follow Penrith's lead, and provide facilities for the training of students attending Evening Classes.

## TEACHERS' CLASS.

A Teachers' Class for men was held in Whitehaven Secondary School, from 15th October to 17th December. The men attending this class, which had a membership of 23, including eight Headmasters, were very keen, and it was quite a pleasure to see the energetic manner in which they entered into all the work. Taking into consideration the distance some of these men had to travel to and from the class, the average attendance was good.

## SPECIAL CLASSES FOR TEACHERS IN RURAL SCHOOLS.

At a future date I hope to be able to arrange a short holiday class for men Teachers in the above Schools. They find it extremely difficult to attend classes in the evening through lack of good train service, and by attending a class on Saturdays, it means giving up the whole day. As to the holding of these classes, the present difficulty is the finding of a suitable centre.

## SECONDARY SCHOOLS.

It is pleasing to note that the Secondary Schools Committee have agreed to appoint a fully-qualified instructor for the Senior Boys attending the County Secondary Schools. Demonstrations have been given during the year at Wigton Nelson, Keswick, and Brampton Secondary Schools.

This year, again on December 15th, a keen competition in Free Standing Swedish Exercises took place at Wigton Nelson's between the various forms. It was very interesting and gratifying to note the decided improvement on last year's work. Form V. gave a very finished exhibition, and gained first place. The work shown was a credit to the two Assistant Masters, who take such an interest in the Physical Training. I acted as judge, and to stimulate a further interest I put the winning class through a table of exercises of a recreative type.

I have the honour to be,

Yours obediently,

W. S. GRAY,  
*Chief (Man) Organiser of Physical Training.*

The first part of the report is devoted to a description of the work done during the year. It is divided into two main sections, the first of which deals with the work done in the laboratory and the second with the work done in the field.

The work done in the laboratory is described in detail, and it is found that the results are in good agreement with those obtained in the field. The work done in the field is also described in detail, and it is found that the results are in good agreement with those obtained in the laboratory.

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