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FIFTH
ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

TO

The Education Committee

OF THE

SALOP COUNTY COUNCIL,

1912.

JAMES WHEATLEY, M.D., D.P.H.

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*To the Chairman and Members of the Salop
Education Committee.*

LADIES AND GENTLEMEN,

I beg to present my fifth Annual Report as Medical Officer to the Salop Local Education Authority in accordance with Circular 576 of the Board of Education, which sets out that "every School Medical Officer should make an annual report to the Local Education Authority on the schools and children under his superintendence, which should be printed for facility of reference and in order that a supply of copies may be available for distribution among the members of the Authority and other persons interested. The Authority should send two copies of the report to the Board of Education as soon as possible after the end of the year under review."

Six copies of this report have now to be sent to the Board of Education.

For the last two years the annual reports have been sent to the head teachers of each school and have in many instances been much appreciated. The fact that the report is widely read by school teachers throughout the County, adds considerably to its value and justifies the inclusion of information that is particularly likely to be interesting and useful to them. For the same reason it is felt that many important matters relating to the health of the children may be repeated with advantage.

The principal matters that need attention in order to make the medical inspection more efficient are :—

- (1) The necessity for some system of school nursing.
- (2) Increased facilities for medical inspection and particularly for the inspection of the eyesight of children at the age of 7 to 8.
- (3) Provision for the X-ray treatment of ringworm.
- (4) The consideration of improved facilities for treatment—including dental treatment.
- (5) The commencement of a definite effort, if possible, along with the Sanitary Authorities to reduce the amount of dental caries.

It cannot, however, be too clearly borne in mind that the greatest effort should be towards bringing the *ordinary child* up to the highest pitch of physical fitness possible, by removing what may broadly be spoken of as unphysiological modes of living.

This preventive work should consist of (1) improvement of school premises ; (2) provision of proper playgrounds or playing fields ; (3) the efficient carrying out of physical exercises ; (4) the teaching and training of the children in matters pertaining to health ; (5) co-operation with Sanitary Authorities so that the children's health shall not be irretrievably damaged before school age.

It has been found desirable to deal separately with the inspection of the children in the Borough of Wenlock and in the rest of the County, on account of the different method of inspection and the very different standard of defects that has evidently been adopted. The conditions found in the Borough of Wenlock are stated at the end of the report.

I take this opportunity of again expressing my opinion of the excellence of the work done by the Medical Inspectors, and also of thanking the Teachers, the Voluntary Helpers, and many of the Clergy for their most cordial co-operation.

I am, Ladies and Gentlemen,

Your obedient Servant,

JAMES WHEATLEY,

County Medical Officer of Health
and School Medical Officer.

County Buildings,
1913.

Area covered by the Salop Local Education Authority, Number of Schools, Departments, and Children on Register.

The area covered by the Salop Education Authority comprises 858,277 acres, and had a population at the 1911 census of 201,673. It is co-terminous with the Administrative County with the exception that the Borough of Shrewsbury is not included. The number of schools is 294, comprising 363 departments. The number of children on the registers necessarily varies from time to time to some extent. On November 1st, 1912, it was 35,891.

Hygienic Conditions of Schools.

In the Report for 1910 a fairly complete analysis of the schools was made with respect to—

- (1) ventilation,
- (2) means of flushing with fresh air,
- (3) methods of cleansing.
- (4) sanitary accommodation,
- (5) lavatory accommodation, and
- (6) cloak rooms.

Since then the Medical Inspectors have reported on the condition of the schools at each visit. The School Medical Officer reports all matters that require remedial action, and these reports are forwarded to the Managers of the schools for their information and consideration. A considerable amount of work has been carried out to remedy the defects found, but a very large amount of work remains to be done in this direction.

In the book of Regulations and Instructions, issued in January, 1912, a section is devoted to Hygienic Conditions in Schools, directing the attention of Managers and Teachers to the salient points with regard to ventilation, cleanliness, heating and sanitary and lavatory accommodation.

Arrangements made for Medical Inspection.

The general arrangements described in last year's report have continued throughout the year.

EMPLOYMENT OF SCHOOL NURSES.—Each year of medical inspection makes it more and more evident that school nurses are an essential, if the children are to be brought up to a reasonable standard of cleanliness, and if there is to be a really satisfactory system for bringing about remedial treatment of the defects found at inspection.

Negotiations were entered into some time ago with the Shropshire Nursing Federation with the object of utilising their nurses on certain terms in the work of school nursing. The time seems now opportune for taking up this matter again and arranging for school nursing throughout the County, by means of district nurses where they are available, and by whole time nurses in connection with the tuberculosis dispensaries, where district nurses are not available.

It is particularly important that the whole time nurses appointed should undertake not only school nursing but other similar work in the district, so that the travelling may be lessened and their efficiency increased.

VOLUNTARY HELPERS.—In connection with most of the schools, helpers have been nominated by the Managers for the purpose of following up the children found defective and attempting to get the conditions remedied.

The practical working of the scheme is as follows :—

As soon as the School Medical Officer receives the report from the head teacher, two months after inspection (see page 8), he forwards particulars of the children needing medical or other treatment to the voluntary helpers in connection with the school. The forms are all usually sent to one helper who distributes them amongst the others according to local circumstances. The helper visits the children allotted to her and endeavours to bring about remedial treatment. In many instances a large amount of energy and tact is shown and the work is done extremely well. In other instances the work has not been so successful, possibly because there has not been a clear understanding as to what is required. The following may be taken as an indication of the lines on which the voluntary helpers should work :—

(1) The primary object should be to induce parents to obtain the necessary treatment for their children.

(2) In doing so they will often have opportunities of bringing about an improvement in home conditions and thus remove the causes of defects.

(3) The deterring influence of physical defects upon the education and physical development of the child and the necessity for their prompt treatment can be pointed out in a practical and convincing manner. This is particularly important in regard to defects of the throat, eyesight, and hearing.

(4) There will always be cases that require some form of material help, and for these there may be some local charitable funds available. As examples might be mentioned the provision of letters of recommendation to hospitals, the provision of railway fares, spectacles, etc.

(5) The Helpers will no doubt in many cases be able to utilise the district nursing associations, and other charitable agencies in the carrying out of this work.

(6) In some instances they will have opportunities of seeing that the defective child has appropriate treatment in a convalescent home or a sanatorium for consumptives, or they will be able to refer consumptive cases to the Local Committee of the Association for Prevention of Consumption.

(7) In the last resort, it will be possible for them to call the attention of the Guardians to any case needing their help.

(8) They may perhaps help to some extent in the matter of verminous heads by raising the tone of public opinion in the district on this question.

Most of this work is done by the helpers working individually, but some of it, for example where funds have to be raised, can best be undertaken by helpers forming themselves into Committees.

My thanks are due to the helpers for the large amount of trouble they have taken. In many instances they have shown a very clear appreciation of what should be attempted, and very successful results have been obtained. It has not, however, in all instances been recognised that the helpers should bring their superior knowledge and influence to bear upon the parents, so that they will see the importance of obtaining the best possible remedial treatment for their children's defects, and that for this purpose it is necessary for the helpers themselves to give some thought to the subject. To simply record the opinions or wishes of the parents, as is done in some instances, without any effort to modify them, is of little use. It is possible that a Conference with the School Medical Officer might improve matters in this respect.

Some of the helpers in the more populous districts are finding the work too laborious. It is noticed that where the services of a fully trained nurse are available the work of following up the cases is carried out with much greater effect.

The following schools are still without helpers, although in a number of these the Vicar or Rector of the Parish has helped in many instances to get treatment :—

Acton Burnell.	Highley.	Priors Lee.
Asterley.	Hope.	Richard's Castle.
Aston.	Hopesay.	Ryton.
Bettws-y-Crwyn.	Ifton Heath.	St. Martin's.
Bridgnorth R.C.	Ketley Bank.	Shelve.
Buildwas.	Kinlet.	Shifnal.
Button Oak.	Kinnersley.	Smethcott.
Cainham.	Knowbury.	Stanton-upon-Hine-Heath.
Chirk Bank.	Langley.	Stiperstones (Worthen).
Church Preen.	Lawley.	Stirchley.
Cleeton.	Lea Cross.	Stoke St. Milborough.
Clunbury.	Leighton.	Stottesdon.
Clunton.	Lilleshall.	Tilstock.
Crudgington.	Loppington.	Uffington, Sundorne.
Deuxhill.	Maesbury Undenominational.	Wellington, Constitution Hill.
Diddlebury.	Mainstone.	Wellington, Wrekin Road.
Donnington Wood.	Malins Lee.	Wem Undenominational.
Dudleston.	Malins Lee Institute.	Wentnor (Stiperstones).
Eaton Constantine.	Minsterley.	Westbury Forest.
Ellerdine.	More.	Weston Rhyn.
Eyton-on-the-Wildmoors.	Moreton.	Whitchurch Wesleyan.
Farlow.	Myddle.	Woodcote.
Frankton.	Neen Sollars.	Woodseaves.
Gobowen.	Newport R.C.	Worfield Endowed.
Great Wollaston.	Newtown.	Wrockwardine.
Hadley.	Pant.	Wrockwardine Wood C.E.
Hadnall.	Pant Glas.	Wrockwardine Wood Council.
Harley.	Pool Hill.	Wroxeter.
Harmer Hill.	Pontesbury.	
High Ercall.	Preston-on-the-Wildmoors.	

It is most desirable that helpers should be obtained for these schools.

TEACHERS.—The teachers undoubtedly have a most important position in the work of medical inspection, and upon the energy and intelligence with which they carry out their work depends much of its success. Their part of the work consists of (1) weighing and measuring the children before inspection ; (2) entering on the cards various particulars with respect to the previous history and present condition of the children ; (3) informing the parents of the date of inspection, getting information from them and persuading them to attend the inspection ; (4) selection of special children for examination who appear to be more or less defective ; (5) transmission of instructions to parents in certain instances ; (6) inquiring into the cases of children found defective and forwarding to the School Medical Officer the reports as to the treatment of these children ; (7) notification to the School Medical Officer of all cases of infectious disease in the school as they occur. Many of the teachers have taken a large amount of trouble to persuade parents to get efficient treatment for their children.

The work done by many of the teachers is by no means confined to these matters, but extends into many other details of personal hygiene.

Considering the important place that the teacher should occupy in this work, it is gratifying to be able to report that they have, with few exceptions, helped most loyally and enthusiastically.

ATTENDANCE OFFICERS.—The Chief Medical Officer of the Board of Education, in his Annual Report for 1910, says there are four particular ways in which the School Attendance Officer can be of great service to the School Medical Officer:—

- “(1) By notifying to the School Medical Officer all cases of non-notifiable infectious diseases which he meets with in ascertaining the causes of absence from school.
- “(2) By notifying all cases of blind, deaf, mentally or physically defective, or epileptic children, or children suffering from chorea, tuberculosis, paralysis, malnutrition or neglect, &c.
- “(3) By notifying all cases of children absent from school on medical grounds.
- “(4) By notifying cases of children who are permanently unfitted to attend school.”

The work of attendance officers in connection with medical inspection has been almost entirely up to the present confined to the investigation of cases excluded from school. In these cases and particularly in the infectious skin conditions (ringworm, scabies, and impetigo), the attendance officers visit and impress upon the parents the necessity for obtaining medical advice or for carrying out the routine treatment prescribed from this department. Such visits have proved to be of great and increasing use.

PRESENCE OF PARENTS AT INSPECTIONS AND THEIR CO-OPERATION IN THE TREATMENT OF DEFECTS.—From the commencement of medical inspection in this County, it has been recognised that the presence of parents at the inspection is of paramount importance, and every effort has been made to obtain their attendance.

It is gratifying to find that their attendance is being well maintained.

There is a disposition for the parents to think that it is unnecessary to attend at the inspection of the older children, and particularly at that of the older boys. It is most desirable that parents of the older children should attend and take the opportunity of asking advice on points that will arise on leaving school, and particularly as to the physical fitness of their children for the occupations they are intended for.

The percentages in the various attendance districts are given in the summary tables.

With regard to individual schools the following may be taken as examples where the attendance of parents was poor:—

School.	Percentage.	School.	Percentage.
*Ratlinghope	0	Deuxhill	16.7
Monkhopton	0	Smethcote	16.7
Stanton Long, Brockton	0	Chapel Lawn	17.6
*Loughton	0	Bishop's Castle Boys	18.2
Lawley Council	10.0	Burwarton	18.2
Aston	10.0	Eyton-on-the-Wildmoors	18.2
Myddle.. .. .	12.0	Dudleston	18.2
Abdon	12.5	Bettws-y-Crwyn	20.0
Cleeton.. .. .	12.5	*Waters Upton	20.0
Melverley	14.3	Woodseaves	20.0

*Numbers very small.

and the following of schools where the attendance was good :—

School.	Percentage.	School.	Percentage.
Clunton	100.0	Clun C.E. Infants	83.3
*Hope Bowdler	100.0	*Pitchford	83.3
Kenley	100.0	Ludlow C.E. Infants	82.5
Westhope	100.0	Stirchley	82.4
Oxon	100.0	Woodcote	81.8
*Pant C.E.	100.0	Stokesay	80.8
Bromfield	94.4	Wombridge Council Infants	80.8
Preston-on-the-Wildmoors	93.7	Mainstone	80.0
Stiperstones (Worthen)	92.9	*Quatford	80.0
Lea Cross	88.2	Chelmarsh	80.0
Boningale	85.7	Cressage	80.0
Llanymynech	85.2	Moreton Corbet	80.0

*Numbers very small.

INTERFERENCE WITH ROUTINE SCHOOL WORK BY MEDICAL INSPECTION.—In the case of small one-roomed schools the examination usually occupied half a day, and those children who were not due for examination were allowed to spend the morning or afternoon in the playground, or were sent home if the weather was wet.

In larger schools the extent of the interference depended greatly upon the teaching arrangements, as the head teacher, with few exceptions, was present at the inspections.

In some of the larger schools all the available accommodation was in constant use. In such cases, groups of children were in turn sent out to play or were sent home.

It cannot be said that the interference with school work was on the whole at all serious.

GENERAL DESCRIPTION OF THE ARRANGEMENTS THAT HAVE BEEN MADE FOR THE CORRELATION OF THE SCHOOL MEDICAL SERVICE WITH THE PUBLIC HEALTH SERVICE.—These arrangements were fully described in the report for 1909. The means for dealing with infectious disease, including the arrangements for notification of disease to the School Medical Officer and the local Medical Officers of Health, school closure, etc., have worked satisfactorily during the year. Whenever there is reason to suppose that the home conditions of any school children are such as to need the attention of the Sanitary Authority, the District Medical Officer of Health or, by arrangement, the Sanitary Inspector, is communicated with.

There is close co-operation between the Medical Officers of Health and the School Medical Officer in all matters relating to the prevention of infectious disease.

EDUCATION COUNTY EXCLUSIVE OF BOROUGH OF WENLOCK.

Extent and Scope of the Medical Inspection carried out in the year 1912.

Besides the two routine medical inspections carried out in accordance with the Education (Administrative Provisions) Act, 1907, section 13, and the instructions of the Board of Education, the Medical Inspectors have examined all children brought under their notice by the teachers or parents on account of supposed defects; they have also re-examined all those children found defective at previous inspections; they have reported on the sanitary condition of the school premises, and they have, when time has allowed, observed and reported on the methods of conducting physical exercises.

The two ages at which the children were examined were 5 and 12 or over, as representing practically new admissions and those who might leave school before the next inspection. Along with the children age 5, any older children who had been admitted to school for the first time during the year were examined.

In order to meet statutory requirements, it has also been necessary to examine more or less superficially a number of children under 5 years of age.

It is not possible with the present staff to examine children of an intermediate age in accordance with the prefatory memorandum of the 1909 Code.

The total number of visits to the schools was 464.

With the exception of three schools, in which the inspection was deferred until the beginning of 1913, on account of outbreaks of infectious disease, all the schools were inspected once, and 21 were inspected twice.

The Board of Education have indicated that they do not regard the inspection of schools once a year as satisfactory.

The number of children examined in the systematic inspection was :—

- 1854 boys, age 12 or over.
- 1849 girls, age 12 or over.
- 2101 boys, age 5 or new admissions over 5.
- 2109 girls, age 5 or new admissions over 5.

Besides these full systematic examinations, 830 children under 5 years of age were superficially examined and 734 were examined at the instance of the teacher on account of supposed defects.

A large amount of time, somewhat difficult to estimate, has been taken up with the most important work of re-examination of those children found defective at previous inspections. It is quite obvious that this work must increase in proportion to the length of time that medical inspection has been in force, until finally, practically all defective children, whose defects have not been satisfactorily remedied, or who for any reason require frequent supervision, are seen by the Medical Inspector at each visit to the school. Although systematic inspection of the children is necessary to discover defects and for other reasons, it is undoubtedly this frequent inspection of the defective children that leads to the most practical results. During the year 3,750 children were re-examined on account of defects previously discovered, and in estimating the amount of inspection done during the year this must be borne in mind. The corresponding number re-examined in 1911 was 2,835.

The total number of children inspected during the year was 13,227, made up as follows :—

7913 examined systematically.

830 children under 5 examined superficially.

734 examined at request of the teachers.

3750 re-examined on account of defects previously found.

The time occupied by an examination has varied greatly according to circumstances, nor can any true average be given. It is possible, however, to form some idea from the number of days the inspectors have actually been engaged on inspection work, and from an estimate of the average amount of time available daily for the *routine* inspection. The amount of time available at the schools for all the purposes of medical inspection may be taken to be $4\frac{1}{2}$ hours.* At least $1\frac{1}{2}$ hours of this, on the average, was taken up with the inspection of children previously found defective, of children under 5 years of age, and of children specially selected for examination by the teachers on account of supposed defects. Roughly speaking only three hours remained for routine inspection. Moreover, this does not take into account the fact that in country districts, with very small schools, time must often be to some extent wasted on account of the impossibility of filling in a full day's work. It is never possible to examine more than two schools in a day, and at some of the smaller schools there are at times only 3 or 4 children for inspection. Again the number of children at a school is often not sufficient for a whole day and still too many for a half-day. These difficulties do not occur in towns with larger schools.

The number of days on which the inspectors were engaged in *systematic* inspections was 401.

On these assumptions the average time occupied by each routine examination was 9.1 minutes, or exactly the same as in 1911.

The average number of children examined in the routine examination each day was 19.7, and including the extra cases and re-examinations, was 33.0.

Condition of the Children.

The number of children examined, the condition of the children as regards nutrition, cleanliness, clothing, etc., and the defects found are stated in the tables at the end of the report. The results of the inspections are not given for each individual school, but for schools grouped in Attendance Districts. They are given separately for each sex and for each inspection age, but the final table refers to both sexes, and to both inspection ages.

Amongst the 7,913 children who were completely examined, 1,485, or 18.8 per cent., were found to be suffering from defects of a sufficiently serious nature to require medical attention. Some of these children were suffering from several defects, so that the total defects requiring attention were considerably in excess of this number.

Besides these, there were a large number of children with more or less slight deviations from the normal, which, although not sufficiently serious to call for medical attention, may, under unfavourable conditions, develop into grave defects.

Amongst 830 children under 5 years of age that were examined more or less superficially, 70 were found to require medical attention.

Amongst the children who were brought to the notice of the inspectors because the teacher thought they were in some respects abnormal, no less than 400 were found to be suffering from defects requiring medical attention. These cases will be spoken of in later parts of the report as extra cases.

In all the cases requiring medical attention, instructions were given to the parent and generally to the teacher. In minor defects, instructions were given where necessary.

This statement again shows that in many respects the condition of the children attending the elementary schools is unsatisfactory.

* Although this is the time strictly available, it is usually exceeded.

Condition of Children with regard to previous Infectious Disease :—Percentage of Children who have had the various diseases.

	Town Schools.				Country Schools.				Total.			
	Males Age 5.	Females Age 5.	Males Age 12 and over and over	Females Age 12 and over	Males Age 5.	Females Age 5.	Males Age 12 and over and over	Females Age 12 and over	Males Age 5.	Females Age 5.	Males Age 12 and over and over	Females Age 12 and over
Measles	68.9	65.6	72.7	75.7	49.2	50.8	69.6	71.3	54.5	54.7	70.5	72.5
Whooping Cough	35.9	39.1	40.0	38.5	34.7	36.1	40.0	44.8	35.0	36.9	40.0	43.1
Chicken-pox	19.0	20.4	20.2	26.6	13.2	14.5	18.9	20.8	14.8	16.1	19.3	22.4
Diphtheria	2.1	1.8	3.3	2.3	1.2	1.3	2.2	3.2	1.5	1.5	2.5	2.9
Scarlet Fever	8.0	5.0	7.7	8.8	4.9	5.4	8.6	9.7	5.7	5.3	8.4	9.5

This table is compiled from the replies obtained from the parents before the medical inspection. The figures are extremely interesting and of considerable importance, as they have a distinct bearing upon the problems connected with the spread of infectious disease in schools. They cannot of course be taken as strictly accurate, but probably there is no great error.

There is fairly close correspondence between these figures and those of previous years, and this may be accepted as confirmatory evidence of their accuracy. The percentages with regard to measles and whooping cough were higher in 1912 at the age of 5 and lower at the age of 12. A comparison of the figures relating to measles, whooping cough, diphtheria and scarlet fever for the last four years is interesting.

MEASLES.

	Age 5.		Age 12.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>
1909	.. 48.2	49.8	78.2	81.9
1910	.. 47.5	49.7	77.0	79.7
1911	.. 50.4	50.6	77.1	79.8
1912	.. 54.5	54.7	70.5	72.5

WHOOPIING COUGH.

	Age 5.		Age 12.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>
1909	.. 36.6	41.2	39.5	45.1
1910	.. 34.1	37.6	40.0	44.7
1911	.. 34.0	34.5	42.3	44.7
1912	.. 35.0	36.9	40.0	43.1

DIPHTHERIA.

	Age 5.		Age 12.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>
1909	.. 1.0	1.7	2.4	2.7
1910	.. 1.6	1.5	2.5	3.3
1911	.. 1.7	1.6	2.7	2.9
1912	.. 1.5	1.5	2.5	2.9

SCARLET FEVER.

	Age 5.		Age 12.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>
1909	.. 3.8	3.9	10.2	11.2
1910	.. 5.2	4.2	10.7	9.5
1911	.. 4.6	5.7	8.7	11.3
1912	.. 5.7	5.3	8.4	9.5

The figures appear to show that roughly about 50 per cent. of the children have measles before the age of 5, and that 25 per cent. are affected between the ages of 5 and 12, which includes most of the school life. The great majority of the children found to have had measles at the age of 5 have no doubt been infected before school life. With regard to whooping cough, about 35 per cent. have suffered by the age of 5, and only an additional 6 per cent. are infected between the ages of 5 and 12. About 1.5 per cent. of the children at the age of 5 have had diphtheria, and another 1.3 per cent. are infected during school life (between 5 and 12). This does not take into account second attacks. About 5 per cent. of the children at the age of 5 have had scarlet fever and about 5 per cent. are infected during school life.

It must be borne in mind that much of the disease in children below school age has originated from older children infected in school.

It is a curious feature of this table that the percentage of girls attacked with the various diseases at the age of 12 is almost in every instance higher than that of boys. The excess at the age of 5 is not so marked. It seems probable that this excess is due to greater care in recording the history of girls by parents. It is hardly likely that the excess is due either to greater liability to disease or closer exposure to infection.

EYE DEFECTS.—The object of the examination, which must necessarily, considering the time at the disposal of the inspectors, be somewhat incomplete, is to discover all cases in which there is any serious defect. The accurate and complete diagnosis of the case is left to the medical practitioner, who undertakes the treatment.

Amongst 7,913 children systematically examined—

567 were found to have defective vision.

227 " " squint.

59 " " other eye defects.

all these defects being sufficiently serious to require medical treatment.

There were also no less than 995 slight deviations from the normal but not at present calling for treatment.

Amongst the extra cases and children under 5 years of age there were—

147 children with defective vision requiring treatment.

45 " " squint.

20 " " other eye defects.

Defective eyesight amongst children systematically examined :—

	Town Schools.			Country Schools.			Total		
	Children examined.	Children with defects	Per-centage of Children with defects	Children examined.	Children with defects	Per-centage of Children with defects	Children examined	Children with defects	Per-centage of Children with defects
Age 12 or over									
Boys ..	511	67	13.7	1343	140	10.4	1854	207	11.2
Girls ..	480	114	23.7	1369	215	15.7	1849	329	17.8
Total ..	991	181	18.3	2712	355	13.1	3703	536	14.5

The children aged 5 are not systematically tested with regard to their eyesight. At this inspection age, 17 boys and 14 girls were discovered with defective vision.

I have previously stated that it is most desirable that all children between 7 and 8 years of age, should have their eyesight tested. The importance of this is obvious. Under the present arrangements a child is not necessarily inspected with regard to its eyesight until it has reached the age of 12. It is true that a certain number of children who obviously have very defective vision are brought under the notice of the Inspectors by the teachers at an earlier age. On the other hand, a large proportion of the defects are discovered for the first time at the age of 12. This necessarily means that these children have been seriously handicapped during the greater part of their school life by unremedied visual defects, but it also means in many instances that these defects have, through absence of treatment, continued to grow worse.

It is very much to be hoped that this serious defect in the scheme of medical inspection will be remedied during the present year.

The percentage of children at the inspection age of 12 found with serious defects of vision has steadily decreased each year.

Year	1908	1909	1910	1911	1912
Percentage defects ..	15.5	14.7	13.3	11.8	14.5

The increase of defects for the year 1912, is probably only apparent, being due to the fact that in this year an alteration was made in the classification. This percentage now includes all serious defects of vision, whether they have been previously remedied by glasses or not.

The excess of defects amongst girls again shows itself.

Year	1908	1909	1910	1911	1912
Excess of defects of eyesight in girls over boys expressed as a percentage	36	64	35	20	53

This excess was very marked during the year.

When an examination is made of the eyesight of children at the age of 7, it will be most interesting to see if the same excess exists at that age or whether it is an excess that is being produced throughout school life.

The figures again show a greater percentage of defects amongst town schools than amongst country schools. The figures for the last five years for boys and girls age 12 are :—

	1908	1909	1910	1911	1912
Town Schools	24.6	18.4	20.6	15.7	18.3
Country Schools	12.5	13.4	10.6	10.5	13.1
Percentage excess of Town Schools over Country Schools	98	37	94	34	40

The excess of visual defects amongst the children of town schools was again well marked. The possibilities of error have been discussed in previous reports. The figures now cover a period of five years inspection, and there has been an excess each year varying roughly, between 30 and 100 per cent. It may be concluded, with some amount of certainty, that there is in this County a considerable excess of visual defects amongst the children of the town schools.

The inquiry made in 1909, 1910 and 1911, into the effect of insufficient or improper lighting of school rooms in causing defects of vision, was continued through 1912. The schools selected were those in which the lighting of one or more rooms was definitely reported by the Medical Inspectors to be unsatisfactory. In the majority of these, the principal defect was insufficiency, but in a certain small number the defect was due solely to the light coming directly from the front. The results obtained are :—

Year	1909		1910		1911		1912	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Percentage excess of defects in the inefficiently lighted schools ..	9.0	10.8	.9	24.6	1.9	7.0	11.6	24.2

or combining the figures for the three years and for the sexes, the defects in these schools were 11.6 per cent. more numerous than in the schools as a whole.

There are certain possibilities of error, and the investigation cannot be considered conclusive, but there seems some reason to think that defects have been produced or aggravated by bad lighting conditions.

The practical object of these inquiries is to find out broadly—how much of the defective vision of children is due to heredity and how much due to environment. The part of environment that we are particularly concerned with, is school life.

There can be no doubt that amongst highly educated races there is a marked loss of acuity of vision, particularly for distant objects. Although hereditary influences acting over long periods of time may be partly responsible, it is certain that the defects to a great extent are produced by adverse conditions acting on each generation.

The figures in this report dealing with the difference in the sexes, in town and country schools, and in well and badly lighted schools, all point in the same direction.

It must at once be admitted that any system of education which is liable to damage irreparably any of our special senses, is defective. It would probably also be safe to say that the damage must almost necessarily extend beyond the "sense" that is observed to be affected.

As bearing upon this point the recently issued report of the British Association for the Advancement of Science, on the "Influence of School Books upon Eyesight," should have the careful consideration of all Education Authorities.

Referring to short sight the report says :—"It is everywhere most frequent among the most studious, and there is a mass of evidence to show that it depends very largely, both in its origin and in its progress, on over-use of the eyes in near work." It is suggested that nothing would be lost by postponing the use of books until the age of 7, wall-charts, black-boards and oral instruction being used. If books are used before this age the children "should be able to lean back in their seats and read from the book propped up on the far side of the desk."

The report deals with the kind and colour of paper, the character, size and spacing of type, the length and spacing of lines and other matters. It is suggested that Education Authorities by adopting a common standard, would render unprofitable the publication of books not coming up to the standard.

I have examined the reading books at several schools in order to see whether they conform to the conditions laid down in the report. Although few of the books examined could be considered grossly unsuitable as regards size and character of type, none of those for children under 7 conformed to the standard laid down. In the majority of these, the vertical height of the type and the interlinear spacing were about 33 per cent. below this standard. Above 7 years of age, some of the books were of a type larger than that specified for the particular age in the report.

In one school visited, no reading books were used for children under 7 years of age, the teaching being by black-board charts, etc., and in this school little or no sewing was taught up to 9 years of age. The books for religious instruction are printed in a type quite unsuitable to the age. In one school the type of the bible and prayer books was less than one quarter the size of the standard type of the report for the age 9—12. Bible reading is usually confined to children over 9 years of age, and occupies about half-an-hour a day.

Dr. Towers says :—" Although much has been done within recent years to improve the type and print employed for text-books in Schools, and to adapt it to the varying ages, the School-Bible seems so far to have escaped attention. In those Bibles which are in use in many of our County Schools, the type, and spacing of words and letters, are such that the child's eye is put on the strain and soon fatigued. To illustrate this practical point, I quote the voluntary statement of a teacher " that A.B. (who has suffered from occasional squint) invariably squinted at Scripture lesson."

" Could Bibles of this description not be discarded, and those with a type not injurious to the eyesight be introduced ?"

I would make the following definite recommendations for consideration :—

- (1) The total abolition of books for the teaching of reading amongst school children under 6 years of age, and the substitution of black-boards, wall charts, etc.
- (2) The adoption of the standard of the British Association as regards all new books.
- (3) The substitution of books conforming to this standard for old ones as quickly as practicable.
- (4) The prevention of needlework or any work requiring eye-strain, under 8 years of age.
- (5) The discouragement of very fine needlework in school.

Defects of Nose and Throat.—The defects of the nose and throat were almost entirely obstructive conditions due to adenoids and enlarged tonsils. Of 7,913 children examined 283 or 3.6 per cent. were suffering from adenoids and 491 or 6.2 per cent. from enlarged tonsils, sufficiently bad to require medical treatment. Amongst the " extra cases " there were 39 cases of adenoids and 32 cases of enlarged tonsils requiring treatment. Amongst the children under 5 years of age there were 11 cases of adenoids and 32 of enlarged tonsils. In all, there were therefore 333 cases of adenoids and 555 cases of enlarged tonsils requiring treatment. In addition there were a large number of children who were suffering from these defects in a minor degree (see table), and to whom instructions were given particularly with regard to breathing exercises.

ADENOIDS.

	TOWN SCHOOLS.					COUNTRY SCHOOLS.					TOTAL.				
	Children ex- amined	Children with Adenoids.		Per- centage of Children with Adenoids.		Children ex- amined.	Children with Adenoids.		Per- centage of Children with Adenoids.		Children ex- amined.	Children with Adenoids.		Per- centage of Children with Adenoids.	
		Bad	Slight	Bad	Slight		Bad	Slight	Bad	Slight		Bad	Slight	Bad	Slight
Age 12 or over—															
Boys ..	511	16	34	3.1	6.7	1343	44	116	3.3	8.6	1854	60	150	3.2	8.1
Girls ..	480	22	29	4.8	6.0	1369	35	95	2.5	6.9	1849	57	124	3.1	6.7
Age 5—															
Boys ..	578	24	62	4.1	10.7	1523	53	170	3.5	11.2	2101	77	232	3.7	11.0
Girls ..	575	24	34	4.2	5.9	1534	65	135	4.2	8.8	2109	89	169	4.2	8.0
Both Ages and Sexes ..	2144	86	159	4.0	7.4	5769	197	516	3.4	8.9	7913	283	675	3.6	8.5

ENLARGED TONSILS.

	TOWN SCHOOLS.					COUNTRY SCHOOLS.					TOTAL.				
	Children ex- amined.	Children with enlarged Tonsils.		Per- centage of Children with enlarged Tonsils.		Children ex- amined.	Children with enlarged Tonsils.		Per- centage of Children with enlarged Tonsils.		Children ex- amined.	Children with enlarged Tonsils.		Per- centage of Children with enlarged Tonsils.	
		Bad	Slight	Bad	Slight		Bad	Slight	Bad	Slight		Bad	Slight	Bad	Slight
Age 12 or over—															
Boys ..	511	22	126	4.3	24.7	1343	59	331	4.4	24.6	1854	81	457	4.4	24.6
Girls ..	480	41	126	8.9	26.2	1369	100	356	7.2	26.0	1849	141	482	7.6	26.1
Age 5—															
Boys ..	578	31	149	5.4	25.8	1523	100	409	6.6	26.9	2101	131	558	6.2	26.6
Girls ..	575	29	138	5.0	24.0	1534	109	375	7.1	24.4	2109	138	513	6.5	24.3
Both Ages and Sexes ..	2144	123	539	5.7	25.1	5769	368	1471	6.4	25.5	7913	491	2010	6.2	25.7

The percentages of children suffering from adenoids sufficiently serious to require medical treatment amongst those coming up for medical examination during the last four years were :—

Year.	Age 5.	Age 12.
1909	6.1	5.5
1910	4.9	4.3
1911	5.2	4.1
1912	3.2	3.9

These figures show an almost continuous diminution in the amount of throat disease found at medical inspection. There was, however, an increase in the number of slight cases not calling for immediate medical treatment. Unless there has been some unconscious alteration in the standard of throat obstruction that requires medical treatment, it seems likely that many of the slighter cases have been arrested by breathing exercises and other preventive measures, or that some of the children have been cured or improved by operation before coming up for systematic examination.

There is considerable obscurity with regard to the cause of adenoids, but whatever the definite exciting cause may be, there seem to be grounds for thinking that their production is favoured by :—

1. Inadequately developed throat and nose, probably due to some extent at least to the absence of food requiring mastication during early childhood.
2. Almost constant exposure to infection in schools.
3. Absence of proper care in keeping the nasal passage clear and in correcting the faulty habits of breathing through the mouth.

If these are the conditions and habits responsible for the production of adenoids the measures that should be taken are evident.

Whether the abolition of the present sloppy method of feeding children, and the substitution of more natural and physiological methods would have any great effect in preventing this condition is a matter on which there are differences of opinion. Its enormous benefits in other directions are, however, indisputable.

The almost constant danger of infection from the various organisms responsible for common colds can only be lessened by efforts to obtain better ventilation, more air space, better separation of the children, and more adequate cleansing of the schoolrooms. In all probability too, the raising of the age of school attendance to six years, at least in country districts, would bring about an improvement in this and allied conditions.

A most important matter is the strict supervision at home and at school, with the object of seeing that the nasal passages are kept clear, that the child does not breathe through the mouth, and particularly that the child does not sleep with its mouth open.

Finally as a matter of prevention breathing exercises should be carried out at school with regard to all children, frequently and efficiently.

With the object of getting proper attention for all cases in the earliest stages the following leaflet has been drawn up :—

PLEASE PRESERVE FOR REFERENCE.

Salop County Council. Elementary Education Department.

MOUTH BREATHING AND ADENOIDS.

Habitual breathing through the mouth is very injurious, causing frequent colds, deafness and mental dulness. It may be a habit or be due to obstruction in the nose or throat (adenoids).

When it is simply a habit, it can be cured by breathing exercises and by constant correction. The child should be provided with a handkerchief, and should use it when necessary, and always before going to bed. Particular attention should be given to see that the child sleeps with its mouth shut.

In serious cases of adenoids, an operation is necessary. After operation breathing exercises should be practised until easy nose breathing is established, and for at least six months.

Slight cases of adenoids should be cured without operation, if sufficient care is taken with the breathing exercises and the other precautions.

BREATHING EXERCISE.

Before commencing the exercise, the nose must be blown thoroughly. During the exercise the mouth must be closed, and all breathing done through the nose.



The child should stand upright with the hands resting lightly on the lower part of the front of the chest (as in figure), so that the movements of the chest can easily be felt.

The child should breathe in slowly and deeply and then breathe out quietly and slowly.

This should be done *twelve times to the minute*, and should be carried out for three minutes every night and morning.

The window of the room should be open and the clothing loose.

JAMES WHEATLEY, M.D.,

School Medical Officer.

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of Education "Syllabus
of Physical Exercises for Schools,
1909," by kind permission
of the Controller of
His Majesty's Stationery Office.*

If it is true as most observers think, that slight cases of adenoids can be cured by properly conducted breathing exercises, it seems reasonable to suppose that many cases can be absolutely prevented by similar exercises.

If one accepts this proposition as proved, the enormous importance of breathing exercises is at once evident.

Considering the great prevalence of adenoids amongst school children and the very harmful effects that are produced, and considering the uncertainty that exists with regard to the causation and prevention of this condition, it appears most desirable that the Board of Education or some other Government Department acting in co-operation with the Board should commence an investigation into this matter. Such investigators would have at their disposal all the School Medical Officers' Reports throughout the country, and would no doubt be able to direct local investigations along proper channels.

It seems a great anomaly that this condition, which is probably preventable and which is employing thousands of operators throughout the country, should receive so little attention from the point of view of causation and prevention.

The difficulty of obtaining treatment, particularly in the remote country districts still exists.

EAR DEFECTS.—One hundred and four, or 1.3 per cent. of the children examined were found to be suffering from discharge of the ear, either present at the time of inspection or recurring at intervals. Eighteen cases were found amongst the extra cases and children under 5 years of age.

Deafness was noticed in 4.2 per cent. of the children examined.

The percentage of discharging ears in town schools was 2.1, compared with 1.0 in country schools.

TEETH.—As in the report for 1911, the statistics with regard to decay of teeth have been got out in three forms.

- (1) the children are classified in four groups according to the number of decayed teeth ;
- (2) the average number of decayed teeth per child is given for each attendance district, the figures being further sub-divided for town and country schools and age and sex ;
- (3) the children are classified in 20 groups, the number of the group indicating the number of decayed teeth of each child in the group ; the figures in this table are further sub-divided for attendance districts and age periods.

	TOWN SCHOOLS.				COUNTRY SCHOOLS.				TOTAL.			
	Percentage of children with sound teeth.	Percentage of children with 1 to 3 (inclusive) teeth decayed.	Percentage of children with 4 to 6 (inclusive) teeth decayed.	Percentage of children with 7 or more teeth decayed.	Percentage of children with sound teeth.	Percentage of children with 1 to 3 (inclusive) teeth decayed.	Percentage of children with 4 to 6 (inclusive) teeth decayed.	Percentage of children with 7 or more teeth decayed.	Percentage of children with sound teeth.	Percentage of children with 1 to 3 (inclusive) teeth decayed.	Percentage of children with 4 to 6 (inclusive) teeth decayed.	Percentage of children with 7 or more teeth decayed.
Boys, 12 years of age and over ..	.4	31.3	38.9	29.4	1.3	30.7	40.0	28.0	1.1	30.9	39.7	28.4
Girls, 12 years of age and over ..	.8	31.5	43.1	24.6	2.5	33.2	39.2	25.1	2.1	32.8	40.2	25.0
Boys, 5 years of age ..	1.4	21.8	22.7	54.2	3.2	21.6	25.1	50.0	2.7	21.7	24.5	51.2
Girls, 5 years of age ..	4.0	19.3	27.0	49.7	3.7	21.3	26.6	48.5	3.7	20.7	26.7	48.8
	1.7	25.6	32.3	40.4	2.7	26.4	32.3	38.6	2.5	26.2	32.3	39.1

Average number of decayed teeth per child in Attendance Districts :—

Attendance Districts.	COUNTRY SCHOOLS.						TOWN SCHOOLS.						TOTAL.			
	Age 5.			Age 12 and over.			Age 5.			Age 12 and over.			Age 5.		Age 12 and over.	
	Boys	Girls	Boys & Girls	Boys	Girls	Boys & Girls	Boys	Girls	Boys & Girls	Boys	Girls	Boys & Girls	Boys	Girls	Boys & Girls	Boys & Girls
Albrighton ..	7.3	6.8	4.3	4.6	4.3	7.3	7.1	6.8	4.3	4.6	4.3	7.0	4.6	4.3	4.4	4.4
Bishop's Castle ..	7.1	7.1	5.9	6.0	5.9	7.1	7.1	7.1	5.9	6.0	5.9	7.1	6.0	5.9	6.0	6.0
Bridgnorth ..	6.3	6.0	4.5	5.3	4.5	6.3	6.3	6.1	4.5	5.4	4.5	6.1	5.4	4.5	4.9	4.9
Church Stretton ..	6.2	5.1	4.7	6.1	4.7	..	..	5.1	4.7	6.1	4.7	5.7	6.1	4.7	5.4	5.4
Cleobury Mortimer ..	7.8	6.7	5.9	5.7	5.9	..	..	6.7	5.9	5.7	5.9	7.3	5.7	5.9	5.8	5.8
Condover ..	6.3	6.7	4.7	4.7	4.7	..	..	6.7	4.7	4.7	4.7	6.5	4.7	4.7	4.7	4.7
Drayton ..	5.9	7.2	4.2	4.6	4.2	7.8	7.8	7.8	4.2	4.9	4.7	7.3	4.8	4.7	4.7	4.7
Ellesmere ..	5.7	7.5	4.9	5.1	4.9	7.9	7.9	8.2	4.9	5.9	5.2	7.0	5.3	5.2	5.2	5.2
Ludlow ..	7.6	7.6	6.1	5.9	6.1	7.9	7.9	7.2	6.1	6.1	6.2	7.6	5.0	6.2	6.1	6.1
Newport ..	6.8	6.1	4.3	4.3	4.6	7.5	7.5	6.9	5.2	5.2	5.2	6.7	4.5	4.8	4.7	4.7
Oswestry ..	8.0	7.5	5.1	5.1	5.0	8.3	8.3	7.6	5.5	5.5	5.6	8.1	5.2	5.2	5.2	5.2
Pontesbury ..	7.3	7.0	4.9	4.9	4.7	..	..	..	..	..	..	7.3	4.9	4.7	4.8	4.8
Shifnal ..	6.8	6.9	4.1	4.9	4.1	6.1	6.1	6.6	4.1	4.1	4.1	6.7	4.7	4.1	4.4	4.4
Wellington ..	6.1	5.5	4.6	4.9	4.6	6.0	6.0	5.7	5.0	5.0	4.5	6.1	4.9	4.5	4.7	4.7
Wem ..	5.9	5.2	4.4	4.2	4.4	9.1	9.1	7.6	5.4	5.4	4.9	7.1	4.6	4.6	4.6	4.6
Whitchurch ..	6.0	7.2	4.4	5.0	4.4	8.0	8.0	9.1	4.5	4.5	5.1	6.6	4.7	4.7	4.7	4.7
Total ..	6.8	6.6	4.9	5.1	4.9	7.3	7.3	7.0	5.2	5.2	5.1	6.9	5.1	4.9	6.8	5.0

Children classified in Groups according to number of Decayed Teeth.

AGE 5.

<i>Number of Decayed Teeth.</i>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Attendance Districts.																					
Albrighton ..	4	7	7	8	7	9	13	10	15	4	12	7	6	6	2	2	1	..	..	..	..
Bishop's Castle ..	3	16	13	12	21	24	17	21	24	18	21	10	7	10	7	3	2	1	..	1	..
Bridgnorth ..	8	29	32	25	22	18	29	29	25	22	24	12	12	6	5	4	..	..	..	..	..
Church Stretton ..	2	9	6	9	8	8	5	5	6	4	6	4	..	3	..	..	..	..	..	..	..
Cleobury Mortimer ..	1	6	7	7	7	15	15	14	17	16	8	11	8	4	3	1	..	..	..	..	..
Condover ..	1	11	24	13	15	19	12	15	11	10	12	12	9	4	5	2	1	..	..	..	..
Drayton ..	15	18	17	21	35	19	21	25	21	26	23	25	22	11	11	7	5	3	3	..	..
Ellesmere ..	10	13	15	17	23	16	17	26	18	10	19	9	15	7	8	4	6	1	..	..	..
Ludlow ..	7	16	22	20	25	35	28	34	42	32	27	20	29	13	12	5	7	3	1	2	..
Newport ..	11	16	18	20	17	14	20	12	21	11	15	12	13	4	6	4	3	2	1	..	..
Oswestry ..	17	18	16	30	45	40	36	43	47	40	31	33	26	25	22	8	6	8	2	2	..
Pontesbury ..	11	12	8	17	7	11	19	13	10	20	9	12	13	5	13	1	1	..	1	..	..
Shifnal ..	7	12	8	19	18	16	18	14	21	20	10	7	12	9	3	2	1	..	1	..	..
Wellington ..	18	63	91	91	74	82	91	69	61	48	55	31	24	9	14	6	4	..	1	..	..
Wem ..	7	12	13	10	15	14	11	11	12	6	12	12	4	3	7	2	..	2	..	..	..
Whitchurch ..	7	9	8	9	5	10	12	12	8	9	10	11	3	4	6	4	3	..	1	..	..
Total Children ..	129	267	305	328	344	350	364	353	359	296	294	228	203	123	124	55	40	20	11	6	..
Percentage of Children in each Group ..	3.1	6.3	7.2	7.8	8.2	8.3	8.7	8.4	8.5	7.0	7.0	5.4	4.8	2.9	2.9	1.3	1.0	.5	.3	.1	..

AGE 12.

<i>Number of Decayed Teeth.</i>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Attendance Districts.																					
Albrighton ..	..	13	10	18	16	13	16	6	6	2	1	1	1	..	..	..	..	..	..	..	..
Bishop's Castle ..	..	7	13	16	26	31	31	34	14	12	9	5	5	2	1	..	..	..	..	..	..
Bridgnorth ..	2	17	37	40	39	41	42	21	18	19	4	1	5	1	..	1	..	..	..	..	..
Church Stretton ..	..	7	9	11	8	13	7	13	8	5	3	1	2	..	1	..	..	..	..	..	..
Cleobury Mortimer ..	..	5	7	10	15	19	12	14	11	5	3	3	2	2	1	..	..	..	..	..	..
Condover ..	..	8	23	24	24	10	16	10	9	7	6	..	..	..	..	1	..	..	..	..	..
Drayton ..	5	22	37	41	43	40	30	21	15	12	6	7	4	1	..	..	..	..	..	..	..
Ellesmere ..	4	17	17	27	41	23	30	20	21	13	6	4	3	..	..	..	2	..	..	..	..
Ludlow ..	..	9	24	27	30	32	43	35	26	19	14	6	10	2	2	1	..	1	..	..	..
Newport ..	8	15	20	30	32	26	25	15	7	7	8	3	1	2	..	..	..	..	..	..	..
Oswestry ..	7	23	42	57	57	61	50	41	20	18	11	11	5	4	3	1	..	..	..	..	..
Pontesbury ..	..	10	18	21	24	17	22	8	11	8	2	..	1	1	..	..	..	..	..	..	..
Shifnal ..	9	15	31	33	30	17	25	18	15	5	3	3	1	1	..	..	..	..	..	..	..
Wellington ..	10	52	102	115	101	84	82	59	39	34	13	15	6	1	4	..	1	..	..	..	..
Wem ..	4	5	12	21	21	12	10	9	5	4	4	1	2	..	..	..	..	..	..	..	..
Whitchurch ..	2	13	23	23	38	29	22	15	6	8	2	3	2	..	1	..	1	..	..	..	..
Total Children ..	51	238	425	514	545	468	463	339	231	178	95	64	50	17	13	4	4	1	..	..	..
Percentage of Children in each Group ..	1.4	6.4	11.5	13.9	14.7	12.6	12.5	9.2	6.2	4.8	2.6	1.7	1.4	.5	.4	.1	.1	.03	..	..	..

These figures correspond very closely with those of the previous year's inspection. They show a somewhat larger amount of decay and in particular they show a considerably smaller number of children with teeth free from decay. These differences are probably due to the increased skill of the inspectors, who now detect very slight cases of decay that might previously have been overlooked. It has always been recognised, that the inspection, being conducted without the use of a probe and mirror, a certain number of carious teeth must be overlooked. These have probably now been reduced to a minimum.

The figures are so remarkable that they should have very careful study. The most striking points are :—

At the age of 12 only about 3 children in 200 have teeth entirely free from decay ; and only about 3 in 100 of the children age 5 have teeth free from decay.

The average number of decayed teeth per child at the age of 5 was 6.8 ; at the age of 12, 5.0.

The most striking point, however, is that out of 4,207 children examined at the inspection age of 5, there were no less than 1,112 children with 10 or more decayed teeth.

Of 3,700 children examined at the age of 12, 996 had 7 or more decayed teeth. As the average age of the teeth at this age is only about 4 years, it is easy to imagine what a deplorable condition the teeth will have reached by the time these child en have become full grown men and women.

Caries of Teeth and Artificial Feeding of Infants.—It is frequently suggested in dental text-books, that the prevalence of caries is due to some extent to hand feeding of infants. It is evident that any inferior process of feeding, or any method of feeding that is liable to produce illness, during the formative period of the teeth, is likely also to cause some amount of mal-development of the teeth. The point, however, is whether, of the enormous mass of dental caries that exists, any considerable proportion can be attributed to artificial feeding of infants.

The present investigation was commenced in October, 1910, and has been carried on through 1911 and 1912.

In 1912 inquiries were made into the method of feeding in infancy with regard to 3,634 children. The results are given in the following table :—

BOYS AND GIRLS AGE 5—6.

Months when breast feeding or bottle feeding ceased.	Breast-fed Children.					Bottle-fed Children.				
	Up to 9	10—12	13—18	19 and upwards	All Breast-fed Children	Up to 9	10—12	13—18	19 and upwards	All Bottle-fed Children
Number of Children examined ..	174	437	525	267	1403	56	307	314	137	814
Number of decayed teeth per child ..	7.2	6.8	7.0	7.3	7.0	7.1	6.6	7.5	7.6	7.2

AGE 12—13.

Number of Children examined ..	72	278	356	198	904	34	186	188	105	513
Number of decayed teeth per child ..	4.6	5.0	4.7	5.2	4.9	5.2	4.8	4.8	5.6	5.0

Amount of dental caries amongst children who have been (1) breast-fed, and (2) bottle-fed, subdivided into town and country schools :—

	TOWN SCHOOLS.				COUNTRY SCHOOLS.			
	Age 5.		Age 12.		Age 5.		Age 12.	
	Breast-fed.	Artificially-fed	Breast-fed.	Artificially-fed	Breast-fed.	Artificially-fed	Breast-fed.	Artificially-fed
Number of decayed teeth per child ..	7.3	7.6	5.3	5.6	6.9	7.0	4.8	4.8

The results of the investigation for the three years may be summarised thus :—

BOYS AND GIRLS.

Year.	Breast-fed Children.		Bottle-fed Children.	
	Number of Children examined.	Number of decayed teeth per Child.	Number of Children examined.	Number of decayed teeth per Child.
		AGE 5—6.		
1910 ..	352	6.2	243	7.0
1911 ..	1248	6.12	771	6.83
1912 ..	1403	7.0	814	7.2
Total ..	3003	6.5	1828	7.0
		AGE 12—13.		
1910 ..	128	4.5	72	4.9
1911 ..	736	4.65	382	4.82
1912 ..	904	4.9	513	5.0
Total ..	1768	4.8	967	4.9

The results appear to me to be a complete refutation of the assertion so often made, that artificial feeding of infants is largely responsible for dental caries in after life.

Eating of "Sweets" as a Cause of Dental Caries.—The term "sweets" is used with the popular meaning, and does not include sugary foods taken at meal times. The classification adopted was :—

- Class 1. Large quantities of sweets eaten—almost every day.
- Class 2. Considerable quantities eaten—several times a week.
- Class 3. Few sweets eaten—about once a week.
- Class 4. No sweets at all eaten.

The classification is necessarily somewhat vague and is not one that can be applied with exactness. Many individual errors will no doubt have occurred, but in the aggregate the classifications are probably sufficiently correct.

Inquiries were made with regard to 5,841 children in all, and included inquiries both from the children and from the parents when present.

The results are stated in tabular form. The number of children is given in each case, so that the value to be attached to the figures can be estimated.

Average number of Carious Teeth per child.

	Class	1	2	3	4
		Large	Considerable	Few	None
<i>Age 5.</i>					
Number of children		137	787	1434	20
Average number of carious teeth per child..		8.9	7.7	6.5	3.2
<i>Age 12.</i>					
Number of children		99	1176	2208	30
Average number of carious teeth per child..		6.3	5.3	4.7	3.7

Number and Percentage of Children free from Caries.

	Class	1	2	3	4
<i>Age 5.</i>					
Number		2	8	53	4
Percentage		1.5	1.0	3.7	20.0
<i>Age 12.</i>					
Number		2	7	41	3
Percentage		2.0	.6	1.9	10.0

Number and Percentage of Children free from Caries or with less than 3 Decayed Teeth.

	Class	1	2	3	4
<i>Age 5.</i>					
Number		11	66	274	11
Percentage		8.0	8.4	19.1	55.0
<i>Age 12.</i>					
Number		14	185	451	11
Percentage		14.1	15.7	20.4	36.7

These figures do not appear to be so conclusive as those of the previous year, but nevertheless they point to the eating of sweets as one important factor in the causation of dental caries.

As in 1911, it was noticed that in rare instances children who ate large quantities of sweets had teeth quite free from decay and *vice versa*, that children who were said to eat no sweets had occasionally a large number of decayed teeth.

These results are in accordance with the theory that eating sweets is *one* of the important factors in the production of caries, and that this cause may be rendered inoperative by otherwise good dietetic habits.

The possible fallacies of this investigation were discussed in last year's report. They have, as far as possible, been guarded against in the present investigation.

CAUSATION AND PREVENTION OF DENTAL CARIES.—This question has been entered into somewhat fully in previous reports. Briefly it may be stated that a diet that gives good exercise for the jaws and which leaves the teeth clean after each meal, will prevent dental caries, and conversely, a diet which requires no mastication and which leaves particles of carbohydrate food clinging to the teeth at the end of a meal will, without fail, cause dental caries.

Sir George Newman, in his report to the Board of Education, says :—

“ First, it cannot be too clearly emphasized that by far the most important factor in the production of dental caries in children is unsuitability in the character of the diet provided from infancy onwards. The immediate cause of the disease is the accumulation about the teeth particularly in the interstices of the teeth and in the interdental spaces, of fermentable carbohydrate material. The presence of these collections of pulstaceous carbohydrate material may be due either (a) to the unsatisfactory form in which the carbohydrate food is taken, or (b) to the absence of some detergent form of fibrous food partaken of at the same time or subsequently, or perhaps most commonly to both these factors operating together.”

Sir George Newman indicates in his report that there are three lines of defence :—

(1) “. . . the primary prevention of dental caries is, in the main and for nearly all practical purposes, a question of diet, in relation to which Education Authorities are concerned only indirectly.”

(2) “ The next line of defence is the maintenance of cleanliness of the teeth and mouth, and this may be secured in large degree by education and training in the proper use of the tooth brush.”

(3) “ Every effort should be made to arrest dental disease at the very onset, and thus to prevent any serious consequences resulting, and at the same time to lessen the likelihood of disease developing in neighbouring teeth. This, indeed, must be considered the immediately practical step which requires to be taken, in some form or other, in the areas of all Local Education Authorities.”

It is obvious that the Chief Medical Officer of the Board of Education contemplates all authorities undertaking conservative dental treatment in the near future. There is no doubt that such treatment would relieve an enormous amount of suffering and prevent much ill health. It is a matter that should receive the careful and early consideration of the Education Authority.

It must, however, be clearly understood that no amount of conservative dentistry will alone solve this problem. An energetic educational campaign must be undertaken, in order that all parents shall have the requisite knowledge for bringing up their children correctly in this respect. This work can be undertaken to some extent through teaching in schools, but to a still greater extent it must be through teaching and instruction at the homes of the people by health visitors, medical men, and nurses. As Sir George Newman points out, this matter concerns Education Authorities only indirectly. It should be recognised as one of the most important works of Sanitary Authorities.

The importance of this work is due to the following facts :—

(1) That this condition is fearfully prevalent.

(2) That an enormous amount of suffering of ill health and of serious organic disease is due to dental caries, oral sepsis, and the errors of diet leading to these.

Sir George Newman, in his Annual Report for 1910, says :—“ Indeed, it is probably true to say that there is no single ailment of school children which is responsible directly or indirectly for a larger proportion of the delicacy and disease (including constitutional disease) which is found at every turn to handicap efficiency, both physical and mental.”

(3) That the radical prevention of dental caries is a simple matter. It is simple in this respect, that any parents with the *requisite knowledge* can ensure with a fair amount of certainty that their children shall have regular and sound teeth free from caries. (This, of course, is supposing that there is no constitutional disease causing malformation of the teeth).

If these are facts, it is obvious that public authorities, both Education and Sanitary, have a unique opportunity of effecting an enormous improvement in the public health. It is undoubtedly the duty of such authorities to bring this information in a practical manner to the notice of every family, and to bring every effort to bear to get the instructions acted upon.

So far, no attempt has been made to induce Sanitary Authorities to undertake this work.

I feel very strongly that this work of prevention of dental caries cannot be properly carried out without a staff of efficiently trained health visitors, whose work would not be confined to infants under one year of age, but who would keep the children under supervision until they arrived at school age. Such a staff would necessarily fulfil many other important duties, but I have no hesitation in saying that if they could make a very appreciable reduction in the amount of caries, say a 50 per cent. reduction, this alone would pay for their services over and over again, in greater efficiency and better health of the inhabitants of the County. It must be remembered that the educational work necessary in this direction would be a decreasing quantity, for the principles taught would become part of the habit and tradition of the people.

It is an undoubted fact upon which practically all observers agree, that amongst the children of our elementary schools the most neglected have the least caries. This must mean that the extra care given by conscientious parents to their children has directly increased the amount of caries. The evil arises then, to a great extent, not through neglect or carelessness, but through ignorance. It is most imperative, therefore, that every effort should be made to remove this ignorance.

So far one has only been able to work through the schools, and to some extent through nurses.

Lectures have now been given to almost all the school teachers in the County, and the following leaflet has been distributed to most households through the schools, the teachers taking the opportunity of explaining it to the children.

SALOP COUNTY COUNCIL.

ELEMENTARY EDUCATION DEPARTMENT.

PREVENTION OF DECAY OF TEETH.

Food often sticks about the teeth after eating. It then decomposes and acts upon the teeth, causing them to decay. **If food can be prevented from sticking to the teeth there will be no decay.**

It is only the starchy and sugary foods (see below) that cause decay, when they stick to the teeth.

To prevent decay you should observe the following rules :—

(1) As soon as an infant needs food other than milk (8—9 months) give it in a solid hard form requiring mastication, such as crusty bread, twice baked bread, or crisp toast. In this way good teeth are likely to grow and good habits of mastication will be formed. **Never give bread soaked in milk, or flour added to milk, or other soft starchy foods** (such as most patent foods).

(2) As the child grows up you should still give most of the food in a hard form, compelling mastication. Food should rarely be taken in a liquid form, or soaked in liquid or minced. Bread should not be eaten new, and it should have plenty of good firm crust.

(3) Drinking between each mouthful is very injurious. Liquids should be taken principally at the end of a meal.

(4) **Sweets should never be taken between meals, nor the last food in a meal** ; but only along with food requiring mastication.

(5) **A meal should always be finished with a cleansing food** (see below). It is very desirable that fresh fruit should be eaten freely, particularly at the end of a meal. This is most important with regard to the last meal of the day.

(6) Mouth breathing in children should always be corrected, and if obstinate, medical advice should be obtained.

EXAMPLES OF FOOD.*Starchy Foods.*

Bread, Biscuits, etc.
*Potatoes.
Rice, Tapioca, Sago, etc.
Oatmeal Porridge,
and similar foods.
Patent foods.

Sugary Foods.

All foods to which sugar
is added.
Sweets of all kinds.
Honey.
Milk.
Jams.
Marmalades.
Patent foods.

Cleansing Foods.

Fresh fruits—particularly apple—
nuts.
Raw Vegetables—celery, radishes
lettuce, onions, carrots, etc.
†Crusts of bread, crisp toast,
twice-baked bread.
Meat, fish, bacon.

* Potatoes are a much better food if cooked and eaten with their skins.

† The coarse whole meal flours are better for this purpose.

JAMES WHEATLEY, M.D.,

County Medical Officer of Health and
School Medical Officer.

COUNTY BUILDINGS,
SHREWSBURY, 1913.

TUBERCULOSIS. *Phthisis*.—Out of 7,913 children examined, only 4 or .05 per cent. were diagnosed as suffering from phthisis. In addition there were 255 or 3.2 per cent. who showed signs or symptoms pointing to phthisis in an early stage, but the symptoms were not sufficiently definite to allow of a diagnosis being made. Amongst the extra cases and the children under 5 years of age, there were 5 definitely diagnosed and 30 suspected.

In order to get confirmatory evidence 4 tins were sent out for specimens of sputum, and one was returned and examined, with a negative result.

In my last year's report I said :—

The whole question of the prevention and treatment of tuberculosis has been greatly modified by two important recent legislative measures, viz., the Compulsory Notification of Consumption Order and the National Insurance Act.

The former has definitely placed the prevention of consumption as one of the specific duties of Sanitary Authorities, and makes the Medical Officer of Health directly responsible for the work.

The latter has provided funds for the treatment of consumption amongst insured persons in its widest sense. It has also been indicated by the Chancellor of the Exchequer that funds will be available for the treatment of school children.

It behoves Education Authorities to consider carefully, what part they should play in this great work. It is important, on the one hand, to see that nothing is omitted which should properly be undertaken by them, and on the other that the same work should not be undertaken by two authorities.

The primary duty of an Education Authority is to discover as far as possible all cases of phthisis amongst school children; the next duty which naturally follows from the first is to bring about treatment of the cases discovered.

A tuberculosis scheme is now being started for the County. The work under the scheme will be closely co-ordinated with that of medical inspection of school children. The immediate steps that will be taken are :—

1. That all cases of suspected tuberculosis amongst school children will be referred to the tuberculosis dispensaries for further examination.
2. The Medical Inspectors will be supplied with information showing them which children in a school come from houses where there is a case of phthisis. Such children will receive special attention.

The scheme provides for 12 beds at the Sanatorium exclusively for children. So far, the question of open-air schools and convalescent homes has not been considered.

It will be possible in future reports to deal much more in detail with cases of phthisis and suspected phthisis found by the Medical Inspectors.

With regard to the necessity for further examination of the children, Dr. Boyes says :—
“ There is great need for a place where children who are suspected to be suffering from phthisis could be referred for further examination. In the great majority of early cases it is impossible to come to a definite diagnosis after one examination in school, or even after several examinations at intervals of about a year.”

The principles that have been acted upon with regard to exclusion from school are (1) if the child is likely to be a source of danger to the other children he must be excluded from school; (2) in other cases, the only consideration is whether exclusion is likely to benefit the child's health or not, and this necessarily depends greatly upon home conditions. During the year 22 children were excluded for varying periods on account of phthisis, diagnosed or suspected.

Other Forms of Tuberculosis.—Only 31 cases were found amongst the children systematically examined and 8 amongst the extra cases. These numbers are considerably in excess of previous years, but they give little indication of the amount of tuberculous disease. Serious tuberculous disease of the bones and joints usually prevents the attendance of children at school.

ANÆMIA.—Only 67 or .8 per cent. of the children were noted as suffering from anæmia sufficiently serious to call for medical attention and unexplained by some other definite condition.

DISEASES OF HEART AND CIRCULATION.—Two hundred and fifty-three or 3.2 per cent. of the children systematically examined were found to be suffering from these conditions. There were 13 children with these defects amongst the extra cases and the children under 5 years of age. The incidence in town and country schools was almost identical. The condition of the heart is now being inquired into more thoroughly, and particularly in relation to rheumatism. The results will be given in next year's report.

Dr. Towers says :—" The subject of rheumatism provides many opportunities to the School Medical Inspector for his practice of preventive medicine.

" Unfortunately the disease is apt to be overlooked because of the insidious character of its onset, and the apparently trivial nature of the early signs and symptoms. It is these that the Medical Inspector has to be on the look-out for, before the disease is established and the child crippled through permanent heart trouble. He would be considerably helped in his work if teachers and parents were so educated as to recognise the significance of a certain group of symptoms, taken individually or collectively, viz. :—

- (a) " Growing-pains."
- (b) Frequent sore throat.
- (c) Headaches.
- (d) Shortness of breath on exertion.

" Sufficient information for this purpose could be given by the circulation of leaflets, which would also advise parents how best to avoid further attacks.

" I would like to point out also, in relation to this disease where damp is such a potent factor, that the hygiene of the cloakroom must not be overlooked. This applies more particularly to the Country Schools, where children come long distances, and there is no provision for the drying of clothes. Better cloakroom accommodation should be provided, where clothes do not overlap and where, by good ventilation there is a free circulation of air. Children might also be encouraged to keep an extra pair of stockings at School for emergencies."

GOITRE.—The cases have been separated in this year's report into marked cases and slight cases, because it was thought that perhaps the marked cases might give a better indication of the localities where endemic goitre flourishes

The attendance districts are here arranged according to the amount of goitre :—

Attendance Districts	Percentage of Cases.			Attendance Districts.	Percentage of Cases.		
	Marked.	Slight.	Total.		Marked.	Slight.	Total.
Ellesmere	2.4	11.9	14.3	Oswestry	1.9	6.5	8.4
Shifnal	2.2	10.9	13.1	Whitchurch	.9	6.2	7.1
Pontesbury	2.1	10.4	12.5	Church Stretton	1.2	5.5	6.7
Newport	1.0	10.7	11.7	Cleobury Mortimer	1.2	5.2	6.4
Bishop's Castle	3.8	7.1	10.9	Condover	1.5	3.8	5.3
Drayton	2.5	8.3	10.8	Bridgnorth	1.7	3.7	5.2
Wem	2.7	8.0	10.7	Wellington	1.2	3.4	4.6
Albrighton	2.7	7.6	10.3	Ludlow	1.5	3.0	4.5

This table shows that enlargement of the thyroid gland exists amongst school children to a greater or lesser degree all over the County.

CASES OF GOITRE IN TOWN AND COUNTRY SCHOOLS EXPRESSED AS PERCENTAGES.

Attendance Districts.	TOWN SCHOOLS.			COUNTRY SCHOOLS.		
	Marked.	Slight.	Total.	Marked.	Slight.	Total.
Bridgnorth	.5	3.7	4.2	2.2	3.7	5.9
Drayton	2.7	8.0	10.7	2.1	8.9	11.0
Ellesmere	1.9	7.6	9.5	2.5	13.1	15.6
Ludlow	1.8	2.2	4.0	1.4	3.4	4.8
Newport	.0	5.3	5.3	1.3	12.7	14.0
Oswestry	.7	2.5	3.2	2.4	8.2	10.6
Shifnal	2.1	15.8	17.9	2.3	9.4	11.7
Wellington	1.1	3.1	4.2	1.2	3.5	4.7
Wem	3.2	10.8	14.0	2.4	6.5	8.9
Whitchurch	.0	4.0	4.0	1.5	7.7	9.2
These 10 Districts ..	1.4	5.1	6.5	1.8	6.9	8.7

I would again point out that the difference in the amount of goitre in the town and country schools is comparatively small, although the children in the town schools mostly drink pure water from public supplies.

The influence of the ductless glands of which the thyroid is one of the most important, upon the economy of the body, is receiving much attention. This influence is certainly of a very profound character. It is therefore of importance that careful records should be made of any abnormality of the thyroid gland, although such records may not be put to any immediate practical use.

DEFORMITIES.—(Evidence of rickets, lateral curvature of the spine, and other deformities).—*Rickets*.—The number of children showing evidence of rickets was small, being 58, or .7 per cent. of the children systematically examined. It varied from 2.5 in the Bishop's Castle, 1.5 Bridgnorth, to none in Albrighton, Ludlow, Newport, and Wem.

Lateral Curvature of the Spine was present in 62 children, or .8 per cent. The importance of this condition is due to the nature of its causation and the possibility of prevention. It is frequently due to malpositions at school arising from badly constructed desks, unsuitable lighting of the rooms or bad habits going uncorrected. It is undoubtedly one of those conditions that can be cured or greatly lessened by suitable exercises. The teacher can do much to prevent this deformity by preventing the children assuming bad positions in school.

The large number of "other deformities" is principally explained by the number of high palates entered under this heading.

RINGWORM.—Of the children systematically examined 115 or 1.5 per cent. were found to be suffering from ringworm, and the percentages in ages and sexes were:—Boys age 5, 2.1; girls age 5, 2.3; boys age 12, .4; girls age 12, .8. On the assumption that the percentage 1.5 is applicable to the children as a whole, there would be at any one time about 487 cases of ringworm in the County.

Amongst the extra cases and those under 5 years there were 124 cases of ringworm.

In addition 349 cases have been notified by the teachers. These were not usually based on medical opinion.

No less than 633 examinations of hairs for ringworm spores have been made by the medical inspectors. Examinations referring to 357 different cases were positive, whilst with the exception of three doubtful results, the remainder were negative.

To combat this condition, all that is possible with our present machinery, is to exclude all cases found by the Medical Inspectors at their periodic visits (frequently at intervals of 12 months) and to exclude all cases either suspected by the teachers or certified by a medical man. The parents are urged to get treatment and the attendance officers instructed to keep the cases under their observation. The cases are re-admitted on medical certificate, but usually without any microscopical examination of hairs. In consequence a considerable proportion of the children are re-admitted whilst still infectious.

It is obvious that such a procedure fails in certain most important particulars and can have comparatively little effect in controlling its spread.

Children are often in school for long periods suffering from ringworm without the disease being discovered; when excluded they frequently do not get medical treatment, and where nurses are not available the treatment prescribed is rarely properly carried out; and when re-admitted as cured they are frequently found to be still suffering.

For the more efficient control of ringworm three conditions are necessary:—

(1) More efficient means for discovering the cases. This would be met by the provision of school nurses.

(2) More efficient means of diagnosis. This has recently been met by an arrangement with the Birmingham University, by means of which medical practitioners can submit hairs for examination.

(3) The provision of X-ray treatment. This matter is under consideration, and the treatment will probably be available shortly.

The interference with the education of individual children that is caused by ringworm of an obstinate character is most serious. Below is given a list of children who have suffered from ringworm for more than two years and who were still suffering, when last inspected. It will be noticed that in two of the cases the disease has lasted four years.

RINGWORM CASES.

Initials of child.	Dates of First and Last Examination.		Duration.	
	First.	Last.	Years.	Months.
G.B.	.. February 20, 1909.	March 15th, 1913.	4	1
P.W.	.. February 27th, 1909.	March 6th, 1913.	4	0
W.A.	.. May 8th, 1909.	March 6th, 1913.	3	10
J.J.D.	.. November 27th, 1909.	February 11th, 1913.	3	2
D.R.	.. September 3rd, 1909.	December 5th, 1912.	3	3
W.E.F.	.. February 12th, 1910.	March 3rd, 1913.	3	1
E.B.	.. May 15th, 1909.	November 16th, 1912.	3	6
G.W.	.. March 19th, 1910.	January 8th, 1913.	2	9
L.P.	.. March 19th, 1910.	September 28th, 1912.	2	6
J.V.S.	.. November 26th, 1910.	February 2nd, 1913.	2	3
M.H.	.. June 18th, 1910.	October 5th, 1912.	2	3
M.J.P.	.. November 26th, 1910.	December 21st, 1912.	2	1
N.M.	.. March 4th, 1911.	March 15th, 1913.	2	0
H.D.	.. December 10th, 1910.	December 14th, 1912.	2	0

IMPETIGO.—Fifty-eight cases of impetigo were found amongst the children systematically examined; 6 were found amongst the children under 5 years of age and 21 were brought under the notice of the inspectors by the teachers. Besides these, 255 have been notified to me by the teachers. In these cases the diagnosis is usually on the authority of the teacher.

This condition is very amenable to treatment, and with suitable measures an outbreak should rarely last more than two or three weeks. On the other hand, if neglected, a school may be seriously affected over a long period.

In all cases that come to our knowledge full instructions are given to both parents and teachers.

SCABIES.—Eighteen cases of scabies were found in the routine examinations; 1 was found amongst the children examined under 5 years of age, and 19 were brought under the notice of the Medical Inspectors by the teachers.

It has been found difficult or almost impossible to induce parents to get medical treatment for this condition, and consequently many children were imperfectly treated or went untreated. On this account definite printed instructions are now issued for treatment. It was possible to do so, as the treatment is of a routine character, needing little or no variation. In order to get the full benefit of the treatment, there should be some power enabling Sanitary Authorities to enforce treatment on other affected members of the family.

VERMINOUS HEADS.—The following table shows the percentages of verminous heads amongst boys and girls at the two inspection ages in the town and country schools :—

PERCENTAGE OF CHILDREN WITH VERMINOUS HEADS.

					Town Schools.	Country Schools.	Total.
Age 12 and over..	Boys	..	..	..	3.1	2.4	2.6
" " ..	Girls	..	..	..	35.4	31.4	32.4
Age 5 ..	Boys	..	..	..	4.8	5.4	5.3
" ..	Girls	..	..	..	28.0	28.3	28.2
Total ..	..	..	..	..	17.5	17.0	17.1

These figures do not show any improvement on the previous year, although there is considerable evidence to show that the standard of cleanliness is much higher and that the very bad verminous conditions are much rarer.

The percentages of verminous heads in the town and country schools were almost equal.

It will be noticed that the percentage of verminous heads was much higher amongst girls than boys, and higher amongst the older than the younger girls.

One can only repeat what has been said in previous reports, *that it is quite impossible to deal effectively with this condition without the help of nurses.*

At the same time, it seems to me that the teacher has a very grave responsibility in this matter. In the first place he should do all he can to raise the tone of the children in this respect. He should make them feel that it is a disgrace to have lice in their heads, and that when present every means should be taken to get rid of them. There is no doubt that much can be done in this way. In the second place he should, when he discovers that any child's head contains lice, call the attention of the parents and give printed instructions. (These instructions are sent to every school and can be always obtained on application). Again, when children have been excluded on account of this condition, he should see that they are free from lice when re-admitted.

Dr. Boyes says :—" In a few girls' schools the teachers have succeeded in getting all the girls to come to school with the hair plaited or tied back. If this were done in every school it would be of great advantage. The chief difficulty is that the parents are apt to look upon a suggestion of this kind as an accusation of neglect on their part, as at present the hair is sometimes plaited in order to conceal an unsatisfactory condition of the head. The parents should be educated up to the fact that this is a precautionary measure to prevent the child of the careful mother becoming contaminated. When plaited hair is recognised as the badge of the clean child there will be no more objection on the part of parents."

If school nurses were available a scheme such as that described on page 53 could be carried out.

MENTALLY DEFECTIVE CHILDREN.—In the routine inspection 20 or .3 per cent. of the children were found to be mentally defective, and the attention of the inspectors was called to 11 other mentally defective children by the teachers.

NUTRITION.

	TOWN SCHOOLS.					COUNTRY SCHOOLS.					TOTAL.				
	Children examined.	Number of children with nutrition below normal.	Percentage of these children to total.	Number of children with nutrition very bad.	Percentage of these children to total.	Children examined.	Number of children with nutrition below normal.	Percentage of these children to total.	Number of children with nutrition very bad.	Percentage of these children to total.	Children examined.	Number of children with nutrition below normal.	Percentage of these children to total.	Number of children with nutrition very bad.	Percentage of these children to total.
Boys 12 years of age and over	511	43	8.6	0	0	1343	99	7.4	0	0	1854	142	7.7	0	0
Girls 12 years of age and over	480	39	8.1	0	0	1369	103	7.5	0	0	1849	142	7.7	0	0
Boys 5 years of age	578	46	8.0	0	0	1523	102	6.7	0	0	2101	148	7.0	0	0
Girls 5 years of age	575	55	9.6	0	0	1534	128	8.3	0	0	2109	183	8.7	0	0
	2144	183	8.5	0	0	5769	432	7.5	0	0	7913	615	7.8	0	0

There are no children classified as having very marked malnutrition not explained by definite disease. The number with nutrition below normal was nearly 8 per cent. In a large proportion of these cases, the parents were communicated with and advice given. Where necessary the attention of the Voluntary Helpers was called to them, and if there was evidence of culpable negligence on the part of the parents, information was sent to the Inspectors of the National Society for the Prevention of Cruelty to Children.

It is obviously impossible, without other machinery, to make any adequate inquiry into home conditions with the object of determining the cause of the malnutrition and providing a remedy. Apart from disease, malnutrition is no doubt due principally to insufficient or improper food, but it may be brought about to some extent at least by insufficient sleep, and generally by bad home conditions. Of all children, probably those suffer the most who have long distances to walk, and bring to school a very insufficient midday meal. One cannot help thinking that much could be done for these children.

The first essential and the most important matter is that a teacher should always be present at these meals. The teacher would soon get accurate knowledge as to which children were insufficiently or improperly fed. He could judiciously point out to the parents where food appeared to be insufficient or unsuitable, and he could supply to the School Medical Officer definite information of great value. Moreover, he could supervise and improve the habits and manners of the children whilst taking their food. He could see that the children did not bolt their food or wash it down their throats with liquid, and so far as the character of the food allowed, he could see that it was eaten so as to leave the mouth and teeth clean. He could discourage the habit of drinking tea with the principal meal; and he could also soon get rid of the habit of drinking beer and cider, which the Medical Inspectors say exists in some districts.

With the help of the Education Authority or of some local body, provision could easily be made for supplying cocoa or soup at cost price ; and where necessary the midday meal could be supplemented.

This, of course, would necessitate further work for the teacher, and would encroach on his dinner hour. It, however, does not admit of doubt that children of ages varying from 5 to 13 should not be permitted to have their principal meal without any supervision. It is also perfectly certain that proper supervision by an intelligent teacher, who has given this matter some thought, if followed up in the manner above described, would have a very beneficial effect.

It would add much to the interest of teachers in this work and would be a guide to them and the medical inspectors if the teachers weighed and registered the weight of each child annually.

CLOTHING AND FOOTGEAR—INSUFFICIENCY AND WANT OF CLEANLINESS.—The numbers and percentages relating to these matters will be found in the tables at the end of the report. It will be seen that although cases of very marked insufficiency are comparatively rare, the clothes were to some extent insufficient in 4.05 per cent., and the boots in 9.5 per cent. With regard to cleanliness it must be remembered that the parents were warned beforehand of the examination, so that the statement that 11.1 per cent. of the children had clothing which in this respect was not satisfactory is likely to be under the mark.

The percentage of children in town schools with insufficient clothing was 6.5, compared with 3.2 in country schools ; with dirty clothing 12.1 in town schools compared with 10.7 in country schools ; with insufficient boots 10.1 in town schools compared with 9.3 in country schools.

In all serious cases the attention of the parents was called to the condition. Where there was reason to think from the appearance of the children, that their homes were likely to be in an insanitary condition, the Medical Officer of Health, or the Inspector of Nuisances of the Sanitary District was communicated with. Where it was thought desirable an intimation was sent to the Inspector of the Society for the Prevention of Cruelty to Children.

The names of 75 children were sent to this Inspector during the year, for him to investigate and take such action as seemed desirable. A report containing the details of each case was afterwards furnished me by the Inspector. I take this opportunity of thanking the Inspector and the Society for the very valuable help they have given us in our attempts to improve the condition of those children who are absolutely neglected by their parents.

HEIGHTS AND WEIGHTS.

The children were weighed and measured by the school teachers without boots, but otherwise in ordinary dress.

The following table shows the heights and weights of the children inspected, and a comparison with the measurements made by the British Association for Advancement of Science in 1883:—

BOYS.

AGE.	Total number of Children measured at the various ages.	HEIGHTS.						WEIGHTS.						Measurements made by British Association for Advancement of Science in 1883	
		TOWN SCHOOLS.		COUNTRY SCHOOLS.		TOTAL.		TOWN SCHOOLS.		COUNTRY SCHOOLS.		TOTAL.		Hts.	Wts.
		Ins.	Cms.	Ins.	Cms.	Ins.	Cms.	Lbs.	Kilos.	Lbs.	Kilos.	Lbs.	Kilos.	Ins.	Lbs.
5	1449	41.1	104	41.1	104	41.1	104	39.0	17.7	39.3	17.8	39.2	17.8	41.0	39.9
6	504	43.0	109	42.6	108	42.7	108	42.4	19.2	41.9	19.0	42.0	19.1	44.0	44.4
7	104	45.0	114	45.2	115	45.1	115	45.1	20.5	46.2	21.0	45.9	20.8	46.0	49.7
8	27	47.7	121	47.8	121	47.8	121	51.3	23.3	52.3	23.7	52.0	23.6	47.1	54.9
9	24	49.2	125	49.1	125	49.1	125	53.7	24.4	56.5	25.6	56.0	25.4	49.7	60.4
10	8	52.3	133	50.1	127	50.9	129	62.2	28.2	56.1	25.4	58.4	26.5	51.8	67.5
11	5	54.0	137	53.5	136	53.6	136	73.2	33.2	72.5	32.9	72.6	32.9	53.5	72.0
12	1700	54.3	138	54.7	139	54.6	139	71.0	32.2	72.8	33.0	72.3	32.8	55.0	76.7
13	148	55.2	140	56.0	142	55.8	142	73.5	33.3	77.9	35.3	76.5	34.7	56.9	82.6
14	4	58.7	149	58.0	147	58.5	149	88.8	40.3	87.0	39.5	88.4	40.1	59.3	92.0

GIRLS.

AGE.	Total number of Children measured at the various ages.	HEIGHTS.						WEIGHTS.						Measurements made by British Association for Advancement of Science in 1883	
		TOWN SCHOOLS.		COUNTRY SCHOOLS.		TOTAL.		TOWN SCHOOLS.		COUNTRY SCHOOLS.		TOTAL.		Hts.	Wts.
		Ins.	Cms.	Ins.	Cms.	Ins.	Cms.	Lbs.	Kilos.	Lbs.	Kilos.	Lbs.	Kilos.	Ins.	Lbs.
5	1407	40.8	104	40.8	104	40.8	104	38.0	17.2	38.5	17.5	38.3	17.4	40.6	39.2
6	501	42.4	108	42.6	108	42.5	108	40.7	18.5	41.2	18.7	41.1	18.6	42.9	41.7
7	114	45.1	115	44.3	113	44.5	113	44.9	20.4	44.0	20.0	44.2	20.0	44.5	47.5
8	40	46.5	118	47.0	119	46.8	119	48.4	22.0	48.9	22.2	48.8	22.1	46.6	52.1
9	13	50.2	128	49.8	126	49.9	127	62.3	28.3	58.2	26.4	58.8	26.7	48.7	55.5
10	13	53.0	135	51.8	132	52.2	133	65.0	29.5	61.1	27.7	62.3	28.3	51.1	62.0
11	2	59.0	150	54.0	137	56.5	144	94.0	42.6	84.7	38.4	89.4	40.6	53.1	68.1
12	1695	54.7	139	55.0	140	54.9	139	71.1	32.3	73.9	33.5	73.2	33.2	55.7	76.4
13	152	56.9	145	56.5	144	56.6	144	77.5	35.2	79.5	36.1	79.0	35.8	57.8	87.2
14	1	—	—	60.0	152	60.0	152	—	—	97.5	44.2	97.5	44.2	59.8	96.7

The important figures are in black type ; the others refer to comparatively small numbers and are consequently of little value.

The heights of the children of the County correspond fairly closely with the measurements of the British Association for the Advancement of Science ; the weights of the children were distinctly below these measurements, particularly at the higher age periods. Boys age 5 were 1.8 per cent. less ; boys age 12, 5.7 per cent. less ; girls age 5, 2.3 per cent. less and girls age 12, 4.2 per cent. less. These figures correspond closely with those for 1910 and 1911.

At the important ages of 5 and 12 in both sexes, the country children were heavier than the town children. The difference with regard to height was very slight, but this also was in favour of country schools.

Treatment.

With the exception of the provision of letters of recommendation for the Eye, Ear, and Throat Hospital for Shropshire and Wales, the Education Authority does not help financially in the treatment of school children. Consequently the cost of medical treatment, including railway fares, the provision of spectacles, etc., have fallen either on the parents, or have been defrayed by local charitable persons, or out of charity funds. The alternative, which one has been very loth to urge, is that the parents should seek Poor-law medical relief. In some districts where the well-to-do bear a fair proportion to the poor, this system has worked fairly well, but in other poorer districts, it is evident that some further help will be required unless a considerable proportion of the children are to go untreated.

The system of following up cases in order to obtain treatment is now as follows :—

The parents of a defective child, if present, are informed of the defect at the time of inspection, and they are given instructions with regard to obtaining medical treatment and other matters. If they are not present they receive written instructions within a few days.

A list of all the defective children is left with the head teacher, who endeavours to obtain treatment, and reports the result within two months to the School Medical Officer.

The names of those children who have not obtained treatment are then forwarded to the Voluntary Helpers in connection with the school. The Voluntary Helpers endeavour to obtain treatment, and in many cases give very material assistance. In due course they report to the School Medical Officer.

These particulars are entered on special treatment cards, and given to the Medical Inspectors when they next visit the school. The cards are not ' closed ' until the children have received adequate medical treatment or have recovered so as not to require treatment or have left school. Until this stage is arrived at, the children are seen at every visit of the Medical Inspectors.

In the schools where there are no Voluntary Helpers, the cases are followed up to some extent by correspondence, and this is also done in certain special cases.

In a few schools, nurses attend at the inspections so as to help the medical inspectors and obtain the necessary information for seeing that proper treatment is provided.

Infectious skin conditions such as impetigo, scabies, and ringworm are reported to the Attendance Officers so that they may insist upon proper treatment. In the case of impetigo and scabies, printed instructions are given for the treatment.

In the case of workhouse children or where the family is in receipt of Poor-law relief, the Guardians are communicated with.

The County Council subscribed last year to the Salop Eye, Ear, and Throat Hospital for 119 letters of recommendation a sum of £26 15s. od.

At the initiation of the County Council the Salop Eye, Ear, and Throat Hospital has arranged for spectacles to be obtained from their official opticians at the following prices :—

Spherical Lenses, per pair,	2s.
Cylinders, per pair	2s. 6d.
Sphero-Cylinders, per pair.	3s.
Frames to have curled sides.	

AMOUNT OF TREATMENT.—In order to make a satisfactory statement with regard to the treatment obtained, it is necessary to deal separately with the children examined in each year. It is particularly so where the children are only examined at long intervals, mostly once a year, and consequently accurate information is frequently not obtained for any given year until long after the close of that year.

If the tables in this year's report be compared with the corresponding ones of last year, it will be seen that the percentage of children who have had treatment has risen from 50.9 to 62.1 for 1910, and from 41.9 to 61.9 for 1911. No doubt there will be a further rise, as many of the children examined in these years who for one reason or another have not had treatment, are attended to.

The percentage of children who have had treatment during the year 1912 is considerably better than the corresponding figure for 1911, published in last year's report. This no doubt is due to the improved methods of following up the cases. The results, although perhaps as good as can be obtained with present facilities, leave much to be desired. With a system of nursing and with more frequent medical inspection, much better results could be obtained.

STATEMENT WITH REGARD TO TREATMENT.

	Defects of							General Health including Diseases of Lungs and Heart.	Other Defects.	Total
	Eyes	Throat	Eyes and Throat	Eyes and Ears	Throat and Ears	Ears	Nose			
1. Known to have received medical advice and treat- ment	217	316	60	4	14	24	2	48	55	740
2. Improved without medical treatment	32	95	8	..	2	6	1	31	4	179
3. Treated by other than medical men	29	..	1	..	..	..	..	..	..	30
4. Not had treatment	80	96	24	1	1	6	..	4	6	218
5. Information incomplete, having left school	62	68	18	..	2	2	3	9	2	166
*Percentage of children who are known to have had medical treatment	60.4	65.8	58.8	80.0	82.4	75.0	40.0	78.7	87.3	65.8
1. Known to have received medical advice and treat- ment	517	680	86	4	35	42	6	138	164	1672
2. Improved without medi- cal treatment	102	239	11	..	7	9	2	91	29	490
3. Treated by other than medical men	49	3	1	..	..	..	..	..	11	64
4. Not had treatment	295	326	83	2	6	9	1	15	17	754
5. Information incomplete, having left school	103	120	30	..	5	3	1	38	29	329
*Percentage of children who are known to have had medical treatment	56.5	60.4	43.2	66.7	76.1	77.8	75.0	72.3	78.1	60.7
1. Known to have received medical advice and treat- ment	302	309	33	4	11	39	3	54	271	1026
2. Improved without medi- cal treatment	82	121	7	..	2	10	1	20	24	267
3. Treated by other than medical men	32	..	..	..	..	1	..	1	12	46
4. Not had treatment	198	171	23	2	1	9	..	10	35	449
5. Information incomplete, having left school	55	59	8	1	1	7	..	7	40	178
*Percentage of children who are known to have had medical treatment	54.4	57.3	51.6	57.1	84.6	70.9	100.0	76.1	78.3	62.1

* For the calculation of these percentages those children who have improved without treatment and those who have been treated by other than medical men are omitted.

	Defects of							General Health including Diseases of Lungs and Heart	Other Defects	Total
	Eyes	Throat	Eyes and Throat	Eyes and Ears	Throat and Ears	Ears	Nose			
				In	1911.					
1. Known to have received medical advice and treatment	271	348	35	4	11	26	6	75	231	1007
2. Improved without medical treatment	24	71	5	..	1	11	1	11	15	139
3. Treated by other than medical men	36	1	1	..	1	2	..	..	10	51
4. Not had treatment ..	175	210	20	2	6	6	3	14	23	459
5. Information incomplete, having left school ..	54	60	3	..	3	4	..	13	24	161
* Percentage of children who are known to have had medical treatment	54.2	56.3	60.3	66.7	55.0	72.2	66.7	73.5	83.1	61.9

	Defects of							General Health including Diseases of Lungs and Heart	Other Defects	Total
	Eyes	Throat	Eyes and Throat	Eyes and Ears	Throat and Ears	Ears	Nose			
				In	1912.					
1. Known to have received medical advice and treatment	224	174	26	2	2	25	1	47	151	652
2. Improved without medical treatment	2	5	..	..	..	..	..	..	2	9
3. Treated by other than medical men	18	..	..	..	..	..	..	..	3	21
4. Not had treatment ..	106	133	13	..	2	7	..	7	16	284
5. Information incomplete, having left school ..	140	162	12	..	2	13	..	16	96	441
* Percentage of children who are known to have had medical treatment	47.7	37.1	51.0	100.0	33.3	55.6	100.0	67.1	57.4	47.3

* For the calculation of these percentages those children who have improved without treatment and those who have been treated by other than medical men are omitted.

Some of the children who have left school and about whom no information could be obtained may have had treatment, but probably this number is small.

The following table shows where the treatment has been obtained :—

	1908	1909	1910	1911	1912	Total.
General Practitioners	427	846	546	587	402	2808
Eye, Ear, & Throat Hospital for Shropshire and Wales	208	655	377	303	198	1741
Salop Infirmary	12	48	24	29	21	134
Bridgnorth and South Shropshire Infirmary ..	40	15	19	28	3	105
Whitchurch Cottage Hospital.. .. .	6	5	4	4	1	20
Ludlow Cottage Hospital	2	5	—	6	—	13
Market Drayton Cottage Hospital	—	7	6	2	1	16
Ellesmere Cottage Hospital	—	—	—	1	—	1
Shifnal Cottage Hospital	—	3	—	—	—	3
Wenlock Hospital	—	3	3	1	1	8
Broseley Hospital	—	—	—	—	1	1
Baschurch Convalescent Home	1	2	1	2	—	6
Oswestry Cottage Hospital	—	—	1	1	1	3
Institutions outside the County	44	83	45	43	23	238
	740	1672	1026	1007	652	5097

It must be admitted that, notwithstanding the excellent work done by Voluntary Helpers, the amount of treatment obtained is not altogether satisfactory. This is partly due to the fact that helpers have not been appointed in connection with every school. There are still 88 schools without helpers.

There is, moreover, evidence to show that in some of the poorer and densely populated districts the Voluntary Helpers, although giving up much time to the work, are not able to bring about a satisfactory amount of treatment in the absence of financial support.

An analysis of the cases in 1912 that have not had treatment was made in order to show the various reasons for such omission. The analysis is necessarily very incomplete, as no information has yet been received with regard to many of the cases. The failure to get medical treatment was apparently due to—

- Poverty in 26 cases ;
- Indifference of parents in 66 ;
- Lack of medical facilities in 28 ;
- Difference of opinion as to necessity of treatment in 5 ;
- Other causes in 20.

In 141 cases information has not yet been obtained, but in all probability they will include a considerable number where treatment has not been obtained on account of poverty and lack of help.

In my report for 1910 I stated that :—The various problems created by poverty of the parents, where the family is not receiving Poor-law medical relief, must be dealt with by voluntary effort and consequently principally by local effort. In many districts funds have been raised for these purposes, and in other districts there are already funds which might perhaps be made available. In order to carry out this work to better advantage it may be found desirable for the voluntary helpers to form themselves into committees.

It appears as if voluntary effort is failing to sufficiently provide the necessary treatment in the poorer parts of the County.

COMPLETENESS OF TREATMENT.—The figures in the foregoing statement probably give a somewhat too favourable impression of the treatment obtained. This is particularly so, in cases that require daily attention, and in cases that require operation and are situated in out-of-the-way country districts. The latter frequently receive palliative treatment rather than the radical cure that operation often brings about. The remedy with regard to the cases requiring daily attention is the provision of school nurses.

TREATMENT OF DEFECTS OF VISION.—A fair measure of success has attended present methods of obtaining treatment for defects of vision. It must, however, be admitted, that when applied to out-of-the-way districts, it is very expensive and wasteful, and it has also often resulted in many instances in the parents buying spectacles without proper medical examination. In addition to the expense of the medical treatment and the spectacles, there is often the expense of a double journey to Shrewsbury of the patient and someone in charge. It is obvious that in remote districts where there is no facility for this treatment, the establishment of centres for the further examination of eyes and prescription of glasses, would not only bring about a much more complete treatment, but would be a great saving in expense.

TREATMENT OF DEFECTS OF TEETH.—As with very few exceptions all the children inspected required treatment for their teeth, and as there is at present no provision for such treatment, it was only practicable to suggest treatment in a few of the more urgent cases. In 81 cases treatment was advised. It was obtained in 20; it was not obtained in 31, and of 30 we have as yet no information.

Treatment received at the Eye, Ear, and Throat Hospital for Shropshire and Wales, Shrewsbury, during the year 1912, on Recommendations supplied by the County Council.—One hundred and nineteen letters of recommendation were supplied. Before a recommendation was supplied, the School Medical Officer certified that the case was a suitable one for treatment at the hospital, and the Managers of the School, that the parents were unable to afford treatment.

One hundred and eighteen of the 119 letters of recommendation were used.

The results of treatment, so far as re-inspection has gone, are very satisfactory.

Of the 118 children applying for treatment, 81 were for eye defects, 29 for throat defects, 4 for ear defects, and 4 for defects of eyes and throat.

Eye Defects.—Forty-six of the 81 children have been re-inspected:—

- 41 have obtained glasses with satisfactory results.
- 2 have had glasses prescribed but not yet obtained them.
- 2 had successful treatment—glasses not required.
- 1 parent refused operation.

Thirty-five have not yet been re-inspected, but information shows that:—

- 23 have obtained glasses.
- 7 have had glasses prescribed but not yet obtained them.
- 2 other treatment than glasses prescribed.
- 3 there is no information concerning.

Throat Defects.—Twenty-one of the 29 children have been re-inspected :—

21 have been operated on with a satisfactory result in most cases.

8 have not yet been re-inspected, but information shows that :—

6 have been operated on.

1—parents objected to operation.

1—operation not necessary.

Of the four children with defects of *eyes and throat*, all have been operated on for their throats and two supplied with glasses.

The four children with ear defects have all received treatment, in two cases with improvement.

Action taken to detect and prevent Infectious Diseases including Reference to Action under Articles 45 (b), 53 (b), and 57 of the Code of 1909.

The revised scheme for the notification of infectious disease by the Head Teachers to the District Medical Officers of Health and the School Medical Officer has been in operation throughout the year, and has worked most satisfactorily.

Arrangements have been made so that all Sanitary Authorities now notify the schools on the outbreak of any notifiable infectious disease, and also notify when the house has been disinfected.

Where it appears that infectious disease, particularly scarlet fever and diphtheria, is spread by means of school agency, and where arrangements will allow, an investigation is made with the object of discovering the cause, and limiting the infection. Several investigations of this kind were made with regard to diphtheria, and numerous swabs taken.

In the case of diphtheria the children are not re-admitted to school until their throats have been declared free from diphtheria bacilli.

Under Article 53 (b) 696 children have been excluded from school for infectious disease :—

100	on account of	impetigo.
378	„	ringworm of scalp.
23	„	ringworm of body.
47	„	scabies.
67	„	verminous conditions.
22	„	pulmonary tuberculosis.
8	„	whooping cough.
8	„	chicken-pox.
1	„	mumps.
5	„	anaemia.
5	„	tonsillitis.
32	„	various causes.

The following is a summary of the cases of infectious disease notified by the head teachers during the years 1910, 1911, and 1912 :—

	1910	1911	1912		1910	1911	1912
Measles	1025	1331	583	Mumps ..	477	710	188
Whooping Cough	450	782	899	Ringworm ..	549	449	349
Scarlet fever ..	276	214	186	Impetigo ..	334	263	255
Diphtheria ..	96	82	44	Scabies ..	79	29	71
Chicken-pox ..	374	358	603	Other diseases	333	152	402

School closure has been effected almost entirely under Article 45 by the School Medical Officer, either on information obtained direct from the school, or on the advice of the District Medical Officer of Health. Under this Article 93 schools were closed for the following reasons :— 27 for measles, 24 for whooping cough, 5 for scarlet fever, 1 for diphtheria, 7 for chicken-pox, 4 for mumps, 21 for influenza, 1 for sore throats, and 3 for other causes.

Under Article 57, two schools were closed by the Sanitary Authority on the advice of the District Medical Officer of Health :—1 for influenza and 1 for scarlatina.

Review of the Methods adopted and the Adequacy of such Methods for Dealing with Blind, Deaf, Mentally or Physically Defective and Epileptic Children under the Acts of 1893 and 1899.

MENTALLY DEFECTIVE CHILDREN.—The Education Authority has an arrangement by which 25 beds are reserved at Sandlebridge School, Cheshire. Six children were examined, but owing to the unwillingness of the parents or the unsuitability of the children, none have been sent during the year.

EPILEPTIC CHILDREN.—Nine children were reported as unfit for the ordinary elementary school, of whom 2 were admitted to special schools in 1912, 2 in 1913, 3 were unsuitable, and in 2 cases the parents were unwilling for the children to be sent away.

BLIND AND DEAF CHILDREN.—The case of every blind child brought to the knowledge of, or discovered by, the Local Education Authority, is carefully considered, and, if it is found to be a suitable case, the child is sent to a Special (Residential) School recognised by the Board of Education.

Three blind children were reported. Two were admitted to special schools and one has left the County.

Three deaf children were reported, and the three, together with two who were reported in 1911, have been admitted to special schools.

The case of a crippled girl has been reported, and she will be admitted to a special school shortly.

THE METHODS AND RESULTS OF INSTRUCTION IN PERSONAL HYGIENE AND TEMPERANCE.—Inquiry by the Medical Inspectors shows that lessons on hygiene and temperance or in the general laws of health, are given in most of the schools to the older scholars, and also practical talks with regard to the prevention of dental caries. The teacher should introduce the teaching of hygiene into every-day school life.

PHYSICAL EXERCISES.—It is pleasing to be able to report that there is from year to year a distinct improvement in the conduct of physical exercises in the schools.

It has been pointed out in the last two Annual Reports that the exercises should be performed daily, and that not less than half an hour a day should be devoted to this work.

In order to estimate how far this advice has been carried out, I have made analysis of the Medical Inspectors' reports affecting 268 departments :—

EXERCISES CARRIED OUT.

Twice or more daily.	Daily for						4 times a week.	3 times a week.	Twice a week.
	30 min.	25 min.	20 min.	15 min.	10 min.	Time not stated.			
10	9	6	71	91	14	17	20	23	7

Although this leaves much room for improvement, it shows that at the large majority of schools physical drill is given daily. It must be remembered too, that besides these formal exercises, breathing exercises are often practised at fairly frequent intervals throughout the day.

It seems desirable that a definite recommendation should now be made that physical exercises should be practised daily for half an hour a day, and that breathing exercises should be taken at intervals throughout the day as opportunity offers.

It is difficult to overestimate the importance of physical exercises for school children if properly conducted. Whilst their first object is to bring the body as a whole up to a high pitch of physical fitness, they also often correct deformities or prevent deformities arising, many such deformities being the result of the artificial conditions of school life.

There can be no doubt that the course that the Education Authority have taken in sending a certain number of teachers to the Summer Vacation Course of the Educational Handwork Association, held at Scarborough, is having excellent results. In the summer of 1911, 6 men teachers were sent, and last summer, 6 women teachers. These teachers were sent on the understanding that they would hold classes in physical exercises for the teachers of the County.

In the session 1911—1912, a course of 20 lectures was held in each of the following centres :—

Centre where Lectures were given.					No. of Teachers attending Lectures.	Total No. of attendances made by Teachers.
Bridgnorth	..	..	..	..	35	604
Craven Arms	..	..	..	..	32	483
Ludlow	..	..	..	..	34	548
Market Drayton	..	..	..	..	31	397
Newport	..	..	..	..	34	437
Whitchurch	..	..	..	..	32	529

In the present session no lectures have so far been held, but it is to be hoped that arrangements will shortly be made.

It is most desirable that a number of teachers should be sent for training again this year.

A field for games should form an important part of school equipment, and when practicable such provision should be made.

ARRANGEMENTS FOR OPEN AIR SCHOOLS.—In the Final Report of the Departmental Committee on Tuberculosis it is stated :—

“ In addition to the provision of treatment at sanatoria and hospitals for tuberculous children mentioned in the Interim Report, there is urgent need for a wide application of the principle of open-air treatment and education by means of open-air schools (day and residential), open-air classes, &c. Such institutions should deal not only with tuberculous children, but also with the large number of children who are suffering from ailments which, if neglected, would be likely to increase their susceptibility to tuberculosis. It is also desirable that these institutions should be utilised, as far as possible, to teach the advisability of the adoption of a practically open-air life in the homes of the children.”

No arrangements of this nature have been made, nor is the necessity for such a school so urgent as it is in large towns. An open-air school, except in a town of some considerable size, must necessarily be a boarding school. Such a school would be practically a convalescent home for school children, in which modified school work and school drill might be carried on under exceptionally good conditions. It would be of great use in the treatment of cases of malnutrition, anaemia, suspected tuberculosis, and in the treatment of cases of adenoids after operation. Apart from the provision of such a school there are two practical points bearing on the same question that should be constantly borne in mind—(1) all new schools should be so constructed that they approach to the conditions of an open-air school, so far as this is possible, without introducing serious defects in other directions, (2) that all covered playgrounds provided in the future should be so situated and constructed that they may be used as open-air classrooms.

An open-air school might, with advantage, be started at Baschurch to deal with those children at the convalescent home who would benefit by education in such a school. The children are often in the home for long periods, and such education would be of great benefit if of a suitable character and made quite subservient to the main object of the institution. There are at present 13 children boarded out in the village and receiving treatment in connection with the home, who are attending the village school. These children could be dealt with more satisfactorily in an open-air school. The provision necessary would entail little capital outlay, and I have reason to think it would meet with the cordial approval of the Authorities of the Home.

Remarks with regard to Provision for future Inspection.

Before concluding the Report it is necessary to consider the requirements of the Board of Education with regard to Medical Inspection, and how far the present arrangements are sufficient to carry them out.

The Education (Administrative Provisions) Act, 1907, says, Sec. 13 (1) :—

“ The powers and duties of a Local Education Authority under Part III. of the Education Act, 1902, shall include :—(b) the duty to provide for the medical inspection of children immediately before or at the time of, or as soon as possible after their admission to a public elementary school, and on such other occasions as the Board of Education direct, and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools.”

The Code of Regulations of the Board of Education for 1909 makes the satisfactory provision for medical inspection one of the conditions for the receipt of grants.

Article 58 (b) of the Code says :—" The Board must be satisfied that provision has been made for the medical inspection of all children admitted to the school since August 1st, 1909, and of all children who are expected to leave school before July 31st, 1910."

The following quotation is taken from the section of the Prefatory Memorandum to the Code dealing with this article :—

" The Board consider that the interests of Medical Inspection in the country as a whole would be best served in the coming educational year by leaving the Local Education Authorities time in which to perfect the organisation of their School Medical Staff, and to attend to the numerous arrangements connected with the improvement of school hygiene which are incidental to medical inspection. The present Code, therefore, makes substantially the same requirements as regards the number of children to be inspected as the Code for 1908 ; *but the Board will expect the Authorities to attain a higher standard than was practicable last year, and to make preparation for inspecting an intermediate group of children in the year commencing 1st August, 1910.*"

No preparation has so far been made for the inspection of an intermediate group of children. An additional inspection would represent the inspection of one-eighth of the children on the registers, or about 4,000.

During the year 1911 the inspectors only found it possible to inspect 7,117 children, or a little over 3,500 children each.

In considering the question of the necessity for increasing the staff of inspectors, the following points have to be borne in mind :—

- (1) The desirability of inspecting children at an intermediate age group.
- (2) The desirability of inspecting the schools at shorter intervals, *e.g.*, town schools three times a year and country schools twice a year.
- (3) The importance of providing means for emergency inspection on account of outbreaks of infectious disease or for other purposes.
- (4) The desirability of further examination of eyesight, so that spectacles may be prescribed.

BOROUGH OF WENLOCK.

GENERAL ARRANGEMENTS FOR MEDICAL INSPECTION.—No alteration of importance has been made in the mode of inspection since the Borough was included in the area of the Salop Education Authority.

The inspection is carried out by three local practitioners.

Efficient and cordial assistance has again been given by the teachers in the duties of weighing and measuring the children, also in entering on the cards information as to age, records of attacks of infectious disease, sufficiency and cleanliness of clothing, etc. The inspections have been worked smoothly and with the minimum possible disturbance of school arrangements. Great assistance is also given by the District Nurses of the Lady Forester Trust, whose services continue to be available by the kind sanction of the Trustees. One or other of the Nurses attends at each inspection, assists in the preparation of the children for examination, and in the clerical work of the cards and summary sheets; also taking note of children in whom defects are found, with a view to following up the cases at their homes.

The parents receive a printed invitation to be present at the inspection. The attendance was remarkably good, being :—

80.7	per cent.	of the parents of boys—entrants.
80.1	"	girls "
58.5	"	boys age 12.
73.6	"	girls age 12.

EXTENT AND SCOPE OF MEDICAL INSPECTION DURING THE YEAR.—Owing to the transfer of this work to the County Education Authority during the year, no inspection was made until November. In November and December all the required inspections were made.

The following groups of children are inspected :—(1) entrants; (2) children 12 years old; (3) children suspected of defects by the teachers.

The number of children examined in the systematic inspection was :—

188	boys age 12.
148	girls age 12.
140	boys on entry.
176	girls on entry.

In addition, 30 children were examined at the request of the teachers.

CONDITION OF THE CHILDREN.—The number of children examined, the condition of the children as regards nutrition, cleanliness, clothing, etc., and the defects found are stated in the tables at the end of the report. The results of the inspections are not given for each individual school, but for the groups of schools inspected by each individual practitioner. They are given separately for each sex and for each inspection age, but the final table refers to the inspections of both sexes, and at both inspection ages.

Amongst the 652 children, 82 or 12.6 were suffering from defects requiring medical treatment. Of the 30 cases referred by the teachers for examination, 16 required medical treatment.

Eye Defects.—Amongst the 652 children systematically examined—

31	or 4.8	per cent.	were found to have defective vision.
8	or 1.2	"	" squint.
6	or .6	"	" other eye defects.

There were also 9 defects found amongst the extra cases.

Defects of Throat and Nose.—Thirty-two or 4.9 per cent. of the children were found to have enlarged tonsils, and only 6 or .9 per cent. to have adenoids requiring treatment. (In the remainder of the County there were four times this proportion reported as requiring treatment for adenoids).

There were also 2 cases of enlarged tonsils and 3 of adenoids requiring treatment amongst the extra cases.

In the schools of one Medical Inspector (Dr. Edwards) no cases of adenoids were found either amongst the children systematically examined (269) or amongst those selected by the teachers.

Ear Defects.—Six or .9 per cent. suffer from discharge from the ear, and in 15 or 2.3 per cent., deafness was noticed. One case of discharge and 6 of deafness occurred amongst the extra cases.

Teeth.

	Percentage of Children with			
	Sound Teeth.	1 to 3 (inclusive) teeth decayed.	4 to 6 (inclusive) teeth decayed.	7 or more teeth decayed.
Boys, 12 years of age and over.. ..	38.3	43.1	17.6	1.1
Girls, 12 years of age and over.. ..	33.8	50.0	15.5	.7
Boys, 5 years of age or entrants ..	46.4	29.3	15.7	8.6
Girls, 5 years of age or entrants ..	40.9	29.5	21.6	8.0
	39.7	38.0	17.8	4.4

There is a very great difference in the amount of dental decay as shown in this table and in the one on page 22 dealing with the remainder of the County. This difference is clearly shown in the following figures :—

		Percentage of children with	
		All teeth sound.	7 or more decayed teeth.
Borough of Wenlock	..	39.7	4.4
Remainder of Education County ..	..	2.5	39.1

One Medical Inspector (Dr. Droop) found 51 per cent. of the children's teeth free from decay.

Tuberculosis.—One case of phthisis was diagnosed, or .2 per cent. of those examined. There were no cases entered as suspected phthisis and no children suffering from other forms of tuberculosis.

Diseases of Heart and Circulation.—Ten children, or 1.5 per cent. were found to be suffering from heart disease, of which 9 were amongst the children examined by one inspector (Dr. Edwards).

Rickets.—Seventeen children or 2.6 per cent. were suffering from the effects of rickets. The whole of these were amongst the children examined by one inspector (Dr. Edwards).

Infective Skin Conditions.—Two cases of ringworm, one of impetigo and none of scabies were discovered at the inspections.

Verminous Heads.—The percentage of verminous heads 7.5, was extremely low. The percentage in the groups of schools varied greatly :—Dr. Droop's, 0.7 per cent. ; Dr. Edwards', 15 per cent. ; Dr. Whitfield's, 3.7 per cent. If these figures represent the conditions throughout the schools, it is a matter of great congratulation.

Routine visits are paid by the Trust's Nurses to the schools, and the children's heads and clothing examined. From details supplied by Mr. Shingler it appears that during the year 385 visits to schools were paid by the Nurses, and 1,389 examinations made, principally for verminous conditions. There can be no doubt that already a very marked improvement has been effected.

I have suggested the following scheme to the Forester Trust for systematising this work and rendering it more effective :—

(1) The Nurse to visit a School to inspect the heads of all the children in attendance, and to make a list of all children with dirty heads and leave it with the Head Teacher.

(2) A card containing directions for the cleansing of dirty heads to be sent in a closed envelope to the parent or guardian of each child to be cleansed, and the Head Teacher to record on the list left by the Nurse the replies received.

(3) The Nurse to visit the School again after an interval of not less than one week to examine the children whose heads were found dirty at the previous visit.

(4) The Nurse to advise the Head Teacher to separate the children still found dirty, and to personally serve cards on the parents or guardians of the children separated, informing them that the child indicated will be excluded from the School at the end of a week if its head is not cleansed within that time.

(5) The Nurse to visit again after an interval of not less than one week, and to examine the children in whose cases cards were served under paragraph (4) and report to the School Medical Officer in detail, advising the exclusion of children still found dirty.

(6) At the time of exclusion the School Medical Officer will inform the parents or guardians of the children affected that unless the children are sent to School clean within one week proceedings will be taken.

(7) After an interval of one week the Nurse to visit the School to meet and examine the children excluded under paragraphs (5) and (6) and, if any child is still found verminous, the Secretary will be furnished by the School Medical Officer with full information for the issue of a summons in each such case.

Clothing and Footgear—Insufficiency and Want of Cleanliness.—The figures given in the table at end of the report show that 1 to 2 per cent. of the children have markedly insufficient clothing and footgear, and that a further 6 or 7 per cent. have insufficiency in a minor degree. Nearly 2 per cent. are recorded as having very dirty clothing, and a further 6 per cent. as having clothing that was not satisfactorily clean.

Heights and Weights.—

BOYS.						GIRLS.					
Age.	Total number of Children examined at the various ages.	Heights.		Weights.		Age.	Total number of Children examined at the various ages.	Heights.		Weights.	
		Ins.	Cms.	Lbs.	Kilos.			Ins.	Cms.	Lbs.	Kilos.
3	5	36.2	92	32.0	14.5	3	8	36.8	94	31.8	14.4
4	64	39.8	101	36.6	16.6	4	63	38.5	98	34.9	15.8
5	57	41.4	105	39.3	17.8	5	55	41.1	104	38.3	17.4
6	9	43.6	111	41.6	18.9	6	17	42.6	108	40.9	18.6
7	9	44.9	114	44.3	20.1	7	7	44.7	114	46.1	20.9
8	4	48.2	122	53.2	24.1	8	7	46.1	117	46.4	21.0
9	3	50.7	129	58.2	26.4	9	11	47.3	120	51.3	23.3
10	2	49.2	125	61.5	27.9	10	6	51.6	131	61.5	27.9
11	2	53.0	135	67.2	30.5	11	3	55.0	140	87.4	39.6
12	144	54.4	138	71.0	32.2	12	124	55.4	141	75.4	34.2
13	31	56.5	144	76.7	34.8	13	23	57.2	145	84.3	38.2

Treatment.—The facilities for treatment are much greater in the Borough of Wenlock than in the rest of the County. This is due to the help very generously given by the Lady Forester Charity Trust, who not only allow their nurses to undertake school nursing but provide for the treatment of defects of eyes, ears, throat and teeth. ..

The general arrangements have been described in previous reports.

The Broseley Hospital has been fitted up with rooms for this work. Defects of eyes, ears, throat and nose are treated by Mr. Russ Wood. The dental work is undertaken by Mr. Mugford, who visits the hospital as required.

Glasses are obtained by the Trust in all cases where prescribed, and supplied to the parents, who are expected to pay a part or the whole of the cost where they can afford it.

Mr. T. C. Shingler, the Secretary to the Trust, has taken a very active interest in supervising and following up the treatment of the cases, and it is greatly due to him that the scheme is so successful.

As the inspection for the year did not take place until November, the amount of treatment so far obtained is not a proper indication of the efficiency of the scheme. The following is an analysis of the treatment of the children found defective :—

	Eyes.	Throat.	Eyes and Throat.	Eyes and Ears.	Throat and Ears.	Ears.	Nose.	General Health including Diseases of Lungs and Heart.	Other Defects.	TOTAL.
Known to have received medical advice and treatment	41	8	..	1	1	10	1	2	11	75
Not had treatment ..	16	6	..	..	..	2	1	..	2	27
Information incomplete ..	..	4	..	..	1	..	1	1	1	8

Of the 75 children who are known to have received medical treatment, fifty-four were treated at the Broseley Hospital, 4 at the Wenlock Hospital, 10 by medical practitioners, and in 7 cases the information is not given.

Failure to get medical treatment was due to indifference of the parents in 16 cases, difference of opinion as regards the necessity for treatment in 3, other causes in 3, and in the remaining 5 cases the reasons are not given.

Teeth.—Ninety-one or 14 per cent. of the children examined were recommended for treatment of their teeth. So far I have only records of 42 children being treated, and of 12 refusals.

In order to put dental treatment on a systematic and satisfactory basis, I have drawn up a scheme and submitted it to the Secretary to the Trust in the hope that the Trust will find it practicable to put it or a similar scheme into operation.

On the 14th instant, the patient was taken to the hospital and placed in the hospital ward. The patient was taken to the hospital ward on the 14th instant.

On the 15th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 15th instant.

On the 16th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 16th instant.

On the 17th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 17th instant.

On the 18th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 18th instant.

On the 19th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 19th instant.

On the 20th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 20th instant.

On the 21st instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 21st instant.

On the 22nd instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 22nd instant.

On the 23rd instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 23rd instant.

On the 24th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 24th instant.

On the 25th instant, the patient was taken to the hospital ward and placed in the hospital ward. The patient was taken to the hospital ward on the 25th instant.

Results of the Medical Inspection of Girls—Age 5—in the Year 1912.

Results of the Medical Inspection of Boys—Age 12 and over—in the Year 1912.

Results of the Medical Inspection of Girls—Age 12 and over—in the Year 1912.

Summary of Results of Medical Inspection in the Year 1912.

Results of the Medical Inspection in the year 1912.

Results of the Medical Inspection of Boys—Age 5—in the Year 1912

