[Report 1926] / School Medical Officer of Health, Cheshire County Council.

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CHESHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

REPORT

OF THE

Chief School Medical Officer

FOR THE YEAR

1926

BY

MEREDITH YOUNG,

M.D., D.P.H., D.S.Sc.,
Of Lincoln's Inn, Barrister-at-Law,
Lecturer in School Hygiene, Victoria University of Manchester.

Phillipson and Golder Ltd., Printers, Chester.

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MEDICAL INSPECTION.

STAFF.

School Medical Officer:

MEREDITH YOUNG, M.D., D.P.H., &c.

Assistant Medical Officers:

A. V. STOCKS, M.A., M.B., Ch.B., D.P.H.
W. J. McIVOR, B.A., M.B., Ch.B., D.P.H.
MARJORIE A. GRANT, M.B., Ch.B.
MARY SHERIDAN, M.B., Ch.B.

Ophthalmic Surgeons:

E. NICHOLAS HUGHES, M.R.C.S., L.R.C.P., D.O.M.S., (R.C.P.S.)
CYRIL JACOBS, M.B., B.S.

School Dentists:

S. WHITWORTH, L.D.S.
S. O. SIEWART, L.D.S.
H. R. PARRY, L.D.S.
E. S. BUTT, L.D.S.

Health Visitors: 33.

Dental Nurses: 4.

Superintendent Clerk:

VINCENT O'CONNOR.

CHESHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

INTRODUCTION.

To the Chairman and Members of the Education Committee.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to present you with my Report on the medical inspection and treatment of school children as carried out during the year 1926.

During this year over 27,000 children have been examined. Of this number nearly one-quarter were found to require treatment for some condition or another thus demonstrating the need for a scheme of this kind.

The steps taken to ensure adequate treatment being carried out have resulted in the relief of a very large amount of ill-health and incapacity. There is, however, still room for improvement under this heading. We know where the leakages are and we are taking every practicable and available means to stop them.

A scheme for the more complete treatment and after-care of cripples will very shortly be put before your Committee and, if adopted—as I feel sure it will be—we shall have as efficient a service as any in the country.

Our relations with other branches of the School Service have remained as cordial as ever and we are indebted not only to your Committee but to Teachers, School Attendance Officers and many others for assistance and kindly co-operation on every occasion when we have applied for it.

I reproduce in this Report a number of comments by my staff which I think are of special value not only intrinsically

but also as exhibiting that keenness of interest which one always fosters in what has at times been described as dullish routine work.

I am personally exceedingly grateful to all concerned for the help given to me in carrying out my part of this great and valuable work.

I am,
Mr. Chairman, Ladies and Gentlemen,
Yours obediently,
MEREDITH YOUNG.

CHESHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

ANNUAL REPORT

OF THE

CHIEF SCHOOL MEDICAL OFFICER

for 1926.

Extent of Inspection.

The following figures shew the gross numbers of children inspected :—

		Number examined.
Routine Inspections	Entrants	7,024
	Intermediates	4,988
	Leavers	6,291
	Total ...	18,303
Special Inspections		6,917
Re-Inspections		2,065
		8,982
	Grand Total ...	27,285

These figures are slightly less than those for 1925, the cause being changes in the staff.

Co-ordination.

The whole of the work which directly or indirectly affects the health of the County is now co-ordinated under a central administration—an arrangement which ensures completeness, smoothness and efficiency with a distinct economy.

Co-operation of Teachers, Parents and Others.

This has been maintained at a high level and no effort has been spared to encourage it. Teachers in particular are to be commended for the part they play in the scheme. On many occasions they sacrifice their personal convenience in order to help forward the work and I think the interest they shew in the health and well-being of their flocks is more manifest than ever. Parents too are coming to know that medical inspection is not a mere search for verminous and uncleanly conditions but a real endeavour to discover defects at their incipient and most tractable stages and to have them remedied under well-advised and assisted conditions.

On this matter Dr. A. V. Stocks writes as under :—

"Once again one has to record the highest appreciation of the work of the Teachers in furthering the medical work in the schools. In several special investigations recently undertaken one has experienced the most cordial and helpful co-operation from the Head Teachers.

"That parents appreciate more and more what we are aiming at, and see the benefits resulting, is evidenced by the numerous requests that are made that children not in the 'code' groups may be examined at the doctor's visit; it is also shown by the increasing number of parents who attend at the visits to the schools. In my area during the year 2,364 parents attended the examination either of children of the routine age groups or of 'special' cases. This is the largest number I have a record of, being more than double the number in 1921.

"It represents 45 per cent. of the children in the above categories, this percentage of parents attending having shown an increase every year for six years in succession."

Dr. Mary Sheridan writes in a similar strain, viz. :—

"For the most part parents are coming to understand the purpose of school medical inspection and are anxious to co-operate. Here and there written refusals of examination occur. In Eccleston C.E. about one-third of the parents objected to their children being inspected. Such a state of affairs must, I think, have been due to some particularly strong minded village gossip who impressed her opinions upon her neighbours. Sometimes when I have sent for a parent who lived near enough, she has withdrawn her objection after a little conversation."

Hygienic Conditions of Schools.

A report is obtained on the sanitary condition of every school inspected and a note of any defect discovered is sent on

to the Director of Education for his attention. I append some remarks from Dr. Mary Sheridan and Dr. A. V. Stocks which are indicative of the defects calling for remedy.

Dr. Mary Sheridan writes :—

"*Floors* are very often washed only once a term, which is insufficient. I noted the floor in Threapwood C.E. to be very dirty. In Waverton the floor needed repair. In Helsby new floors had just been laid down.

"*Windows* are sometimes inadequate and in a few country schools (*e.g.*, Woodchurch C.E.) somewhat darkened by trees in summer. In Frodsham C.E. Girls' the windows look on to a narrow dark entry. I was at the school in December, and we burnt electric light most of the afternoon.

"*Artificial Lighting* in many schools is poor (*e.g.*, Moreton C.E.) In some of the country schools (Thornton-le-Moors C.E., Ince Council, etc.) it is non-existent. Since the schools close at 3-30 in winter artificial light is not often needed, but in dark weather the eyestrain of pupils and teachers must be considerable.

"*Playgrounds* are very poor in some schools, *e.g.*, Parkgate C.E., Whitley Council, New Ferry C.E., Moreton C.E., Bidston C.E., which are small and not paved. They are dusty in summer and muddy in winter. Often pools collect through which children must pass on their way to the offices. Often they deliberately play in these pools. I noticed some big boys in New Ferry walking through a large pool at the dinner hour. They would then sit all afternoon in wet boots. In Willaston C.E. the children have *no* playground at all.

"*Cloakrooms* are not large enough in many schools. The worst example of overcrowding was Whitby Council. In Frodsham Five Crosses Infants' the pegs are too high for the little ones to reach and too close together for cleanliness. In most schools the children have their own special peg with their name on. At West Kirby C.E. Infants' the babies have each a picture over their own peg. At Heswall C.E. the children are provided with mirrors, so that there is no excuse for unwashed faces.

"*Lavatories* in country schools are usually most inadequate. Sometimes bowls are provided and no water (*e.g.*, Waverton C.E.), sometimes there is only one bowl for the whole school.

"*Closets* are usually kept in a clean condition by the caretakers. The pail system persists in many country schools,

but even in rural places water is gradually being introduced, *e.g.*, Barnston. One of the big girls is usually entrusted to flush all the closets twice daily.

"*Urinals* are often inadequately drained. Sometimes there is no channel at all (Huxley C.E.) and evil-smelling pools collect. Very frequently the grids become blocked with sand, leaves and debris. It would be much better if in all places where water was available a tap could be installed, and the urinals thoroughly flushed after every recreation.

"In Moreton Temporary Council (Victory Hall) and Ellesmere Port Cambridge Road Infants' I was told that outsiders used the offices and could not be prevented from so doing out of school hours. This is most objectionable as well as a possible source of danger to the children. In Helsby C.E. strong gates have been erected to prevent outsiders from entering the offices.

"*Desks* in some country schools are poor, but everywhere are being gradually replaced by the modern dual desk. I was surprised to see many of the old fashioned backless forms and desks in Port Sunlight Council School.

"*Heating* as a rule is good, though central heating is usually found only in the urban schools.

"The newer schools all have rooms where the medical inspection can be very conveniently held. In some of the country schools it is difficult to conduct the examination as completely as one would wish."

Dr. A. V. Stocks reports:—

"*Cloakrooms.* In last year's report mention was made of two typical cases of lack of proper accommodation. Another example from a country school may here be mentioned, where there are 82 children and only a total of 30 unbroken pegs available for their coats, etc.

"*Sanitary Conveniences.* In two cases defects pointed out previously have been remedied by structural changes. Many latrines need more frequent white-washing and four such were specially reported on this year.

"*Ventilation.* This was found defective in some classrooms. In one case reported on last year new ventilators have since been put in. Excessive ventilation due to draughts under doors was noted at several schools, causing cold feet to the children in the room, and draught excluders were suggested to remedy the defect, due usually to the wearing away of doorsteps under the doors."

The Findings of Medical Inspection.

Malnutrition.—During the year only 25 cases are reported under this heading as against 51 in 1925. In these 25 cases however the condition was so marked as to call for special care and treatment.

The report of Dr. A. V. Stocks is of special interest. He writes as under :—

"It is stated in the Report of the Chief Medical Officer to the Board of Education for 1925, page 143, that the physical condition of children has improved, the London child for instance having increased in height and weight since 1907.

"Dr. Mumford has shown a similar increase in the physical measurements of Manchester Grammar School boys.

"In order to see the general tendency in the part of Cheshire with which I am familiar I have analysed the weight figures for 1,700 children aged between 8 and 9 years, of whom half were examined during 1921 and the other half during 1926.

"The results are given below and show that the average weight of the boy aged eight years is a pound more than it was five years ago, while the girls show an exactly similar gain in weight.

	No. of boys examined.	Average weight of boys aged 8 years.	No. of girls examined.	Average weight of girls aged 8 years.
1921 ...	325	... 52·5 lbs.	... 422	... 50·5 lbs.
1926 ...	523	... 53·44 lbs.	... 429	... 51·45 lbs.

Distribution of weights.

	Below 50 lbs.	Above 59 and below 60 lbs.	Above 60 lbs.
Girls—1921 ...	42·9 per cent....	52·2 per cent....	5·9 per cent.
1926 ...	40·6 „	... 51 „ ..	8·4 „
Boys—1921 ...	38 „	... 50 „	... 12 „
1926 ...	28·3 „	... 54·2 „	... 17·5 „

"This illustrates the same facts in a different way and shows how the proportion of well nourished children has increased in the five years.

"As to the cause, this is to be attributed, in my opinion, to the fact that the children who were eight years of age in 1921 were suffering more severely from the effects of war-time rationing than are the present intermediates, who were only

infants at the time the war ended. Increased care and supervision by parents, School Nurses, Welfare Centres and other agencies have also had their effect.

"These figures are also of interest in view of the widespread unemployment that has existed between the two dates and the economic changes that have occurred since 1921."

Dr. Mary Sheridan's report contains the following observations :—

"*Dinners.*—In many country schools the children cannot go home during the dinner hour, and frequently the food they bring themselves is inadequate in quantity and quality. I have noticed too that they eat what they have brought as rapidly as possible in order to get out into the playground for recreation. In Tilston a very interesting experiment has been tried of providing hot lunches daily at 2d. per head. The results are most beneficial to the children, and it would be well if the system could be extended to every school, urban as well as rural. The greater number subscribing to these dinners the better and more varied the menu can become. Surprising as it may seem the dinners are self-supporting. In nearly every district some lady could be found willing to take charge of the ordering, etc. In Tilston the school caretaker acts as cook, and the food is prepared in a specially erected hut in the grounds. The bigger girls help with the laying of tables, serving, etc., and the teachers take turns at supervision. This is very tying for the teachers, but when the system is in full swing, they will probably be able to leave it largely in the hands of the older girls. It is, I think, an excellent scheme, deserving of the popularity it is rapidly achieving.

"*The Need for Some System of distributing Cod Liver Oil.*—There are so many children found to be thin and pale, as well as those who are definitely anæmic, delicate and undernourished, whose parents cannot afford to buy them any kind of tonic or emulsion, and who live too far from any hospital or charitable institution where they could be provided with it, that I think that, if practicable, a scheme for distributing this from the schools at a cost which the parents could afford would be very beneficial. Such a scheme, of course, would entail more work on the part of the head teachers, but I think, in the circumstances, they would not raise objections. Leaving the matter in their hands is advisable, I think, because they are usually cognisant of the financial status of all the families in their care."

Uncleanliness.—The total number of children reported as uncleanly is 485—a considerable improvement on the records

of the previous year. When, however, one comes to add to the above figure (which is the record of the cases reported by the Medical Inspectors, who only examine children whose parents know that they are going to be inspected) the number found unclean by the Health Visitors who pay unexpected visits to the school the total becomes unpleasantly large. These Health Visitors found 2,465 children in an uncleanly condition—a figure which works out to 6 per cent. of those examined.

Dr. Mary Sheridan reports as follows :—

"Faults in clothing were usually uncleanliness and lack of repair. A few were insufficiently clad, and several were over-clad ; but the teachers tell me over-clothing is much less common than it used to be. The worst cases of unclean clothing and dirty heads, etc., were found in the Moreton and Ellesmere Port areas—especially the Moreton Temporary Council Schools, and the Ellesmere Port Cambridge Road Infants' and St. John Street Council Schools. For some reason the Church Schools in both places seemed to have a cleaner type of child in attendance.

"*Cleanliness* (Head and Body)

	Boys.		Girls.
2.8 per cent. of all cases	40	...	98

"Cases where a few accidental nits were found in the head of a child obviously well looked after have not been counted. These numbers indicate definite uncleanliness. Since short hair for girls came into fashion, the improvement in cleanliness has been most marked. It is pleasant to find that in a large girls' school I have come across only one case of nits in hair out of 90 children examined (New Ferry, Chester Road, Council). Only a few boys, comparatively, have dirty heads, but I have found them far less particular about washing their faces and bodies than the girls."

Dr. A. V. Stocks reports that :—

"At the routine inspections 177 children were found to have unclean heads, or 3.4 per cent. ; cases of uncleanliness of the body were almost as numerous (171).

"This is slightly higher than last year though an improvement upon 1924.

"On consulting the County Report for 1911 I note that the percentage of unclean heads found at the examination of entrants and leavers was 9.6 per cent.

"This condition is therefore only about one-third as prevalent as it was 15 years ago, but we cannot remain satisfied as long as one child in every thirty has evidence of vermin upon its person."

Skin Diseases.

In this group of defects Impetigo shews no diminution on the records of previous years, 1,158 cases being reported. Other conditions are :—

Scabies (Itch), 69 cases.
Ringworm, 241 cases.
Other (Non-Tuberculous) conditions, 117 cases.
Tuberculous conditions, 7 cases.

Dr. A. V. Stocks reports :—

"Impetigo was found to exist in 69 cases at the routine inspections; many more were of course seen as special cases at the Minor Ailment Clinics and as specials in the schools. This gives a percentage of 1.3, as compared with 1.0 per cent. found by Dr. Gibson in Mid-Cheshire in 1911, so there is no evidence of decrease in this ailment.

"Ringworm is still rife in a few schools and the Minor Ailment Clinics are rarely without a number of cases in attendance. I found only eight cases however at the routine examinations in the schools, of which six were on the body. This compares with 55 cases of ringworm of the scalp reported by Dr. Gibson for Mid-Cheshire in 1911, so we appear to be improving considerably in this respect.

"Scabies was only found in one child at the routine inspections, the smallest number I have record of, and compares with 21 found in Mid-Cheshire in 1911 by Dr. Gibson.

"Lupus was observed in three cases."

Eye Diseases and Defects of Vision.

The list of defects under this heading remains a high one and includes the following :—

Inflammation of eyelids	355
Defective Vision (excluding squint)	2809
Squint	419

The total number of defects of the eye (with the exception of minor ailments) dealt with either under our scheme or privately was 2,880. Spectacles were prescribed in 1,580 cases and actually obtained in 1,110 cases.

Dr. C. Jacobs, one of the Ophthalmic Surgeons under your Committee's Scheme, reports as follows as regards his portion of the County :—

"I give below figures for the year ending December 31st, 1926. There is not much of interest on which to comment which has not already been referred to by Dr. Hughes, and in previous reports.

"The results from the occlusion treatment in cases of squint are almost always favourable except when the treatment is started too late. For the best results to be obtained, it should be commenced as soon as the squint has developed permanent tendencies, the squinting eye is thus saved from becoming amblyopic. This of course should be in addition to the wearing of suitable glasses where these are indicated, and which should be worn as soon as a refractive error calling for correction is discovered.

Dr. Hughes' suggestion as to the routine examination of all infants as soon as possible after their commencing school life is a particularly valuable one. If this were done many cases of squint would be prevented, and the evil effects resulting from uncorrected errors of refraction would be largely eliminated.

Number of cases examined during the year	...	1768
Number of cases where no glasses were required	...	829
Number of cases where glasses were prescribed	...	668
Number of cases in which other forms of treatment were prescribed	...	346
Blepharitis	...	118 cases.
Conjunctivitis	...	29 ,,
Corneal Opacities	...	28 ,,
Defective vision (excluding squint)	...	1302 ,,
Squint	...	217 ,,
Other conditions	...	49 ,,

The following is the Report by Dr. E. Nicholas Hughes :—

"1,443 School children were examined in 152 sessions. The following is a classified list of the various refractive errors and eye diseases discovered :—

	Boys.	Girls.
Hypermetropia	... 66	... 67
Hypermetropic Astigmatism	... 143	... 193
Myopia	... 23	... 41
Myopic Astigmatism	... 29	... 41
Mixed Astigmatism	... 12	... 20
Right Convergent Concomitant Strabismus	... 31	... 26
Left Convergent Concomitant Strabismus	... 40	... 31

	Boys.	Girls.
To Wear Own Glasses	41	59
Wearing unnecessary Glasses	2	—
Glasses not required	184	220
Abscess of Eye-brow	—	1
Aphakia (following trauma)	1	—
Blepharitis (Chronic)	21	41
Cataract. Congenital Lamellar ...	3	1
do. Anterior Polar	1	1
do. Posterior Polar	—	1
do. Posterior Cortical	1	—
do. Congenital Striate	1	—
Conjunctivitis (Catarrhal)	1	4
do. (Follicular)	4	2
Contracted Socket	1	—
Corneal Ulcer	2	2
Corneal Nebulae	13	18
Cornea, Wound of	1	—
Coloboma Iridis	1	—
do. do. et Choroid	—	1
Chorio-retinitis (old)	—	1
Dacryocystitus (Acute)	—	2
Dermoid Cyst of Orbit	1	—
Dermatitis of Eye-lids	—	1
Divergent Strabismus	—	1
Embryontoxon	1	—
Epicanthus	2	—
Exophthalmos	—	1
Exophoria	—	2
Foreign Body on Cornea	2	—
Hordeolum (Acute)	2	1
Interstitial Keratitis	—	1
Iritis	—	1
do. (Antenatal)	—	1
Keratitis Punctata Superficialis ...	2	2
do. Phlyctenular	1	5
Lachrymal Obstruction	—	1
Leucoma Adherens	1	—
Macular Retinitis	3	3
Microphthalmos	—	1
Nystagmus (Congenital)	1	—
Paralysis of Right External Rectus ...	—	1
Ptosis (Congenital)	2	2
Retina, Rupture of	1	—
Retinal Exudate (old)	—	1
Retinitis Punctata Albescens	—	1
Sclerosis of Lachrymal Puncta ...	—	1
Tarsal Cyst	—	1
Xerosis Conjunctivae	—	1
	643	800

"Glasses were ordered for 693 children. Six children were admitted into Hospital under my care and operated upon for squint. One operation was also performed for chronic Dacryocystitis. I found it necessary to admit several severe cases of Phlyctenular Keratitis and Corneal Ulcers into Hospital for treatment.

"Refractive errors were more prevalent in the Runcorn area. The children in Runcorn are examined at the Welfare Centre, where a room has been specially equipped for eye examinations. I have found the parents of the Runcorn children most appreciative of the facilities offered by the Education Committee for eye examinations, a large number of mothers attending the Centre when their children are being examined.

"The commonest refractive error is Hypermetropic Astigmatism, which according to the numbers I have examined is more frequent in girls than in boys. On the other hand, squint is more frequent in boys.

"A large proportion of the older children suffering from squint had very defective vision in the squinting eye. Instruction was given in these cases for the training of the defective eye.

"In many cases of high astigmatism, normal vision could not be induced with glasses (the child having become so accustomed to a diffused retinal image that insensitiveness had occurred in the retinal cones). I strongly advocate that a systematic examination of every child in the Infants' Department should be made, and for preference, as soon as possible after admission. By this means, children suffering from errors of refraction will be discovered and suitable glasses prescribed at the commencement of their school careers. By this means many latent cases of squint will be prevented. Also in cases of high astigmatism the wearing of correct lenses will ensure a natural retinal image and proper stimulation of the macular or cone-bearing area of the retina.

"The method of examination of young children is perfectly accurate, the refractive error being diagnosed entirely by the oculist, no aid from the child being necessary. The method employed requires a darkened room and a bright source of illumination. This method also is very rapid, the absence of a refractive error being diagnosed in less than a minute.

"For the systematic examination a cycloplegic is not necessary, but the use of one is advisable when a refractive error has been discovered. To facilitate the work I have designed a portable dark room and electric retinoscopy lamp."

Dr. A. V. Stocks submits the following remarks :—

"A study of the records of the examination of the eye-sight of 1,700 'leavers' during 1926 shows that 4 per cent. of the boys and 5 per cent. of the girls were wearing glasses.

"It also reveals the disquieting fact that 103 boys, or 12 per cent., and 120 girls, or 14.3 per cent., were suffering from defects of vision of such a nature as to make reference to the Oculist desirable.

"I have compared these figures with those in my possession for 1921, during which year I examined 1,370 'leavers' and recorded the results of the tests for vision.

"The percentage then who showed a failure to reach the same standard of vision as adopted for the above figures in the case of both boys and girls was 10.7.

"This is disquieting because it seems to indicate that defective vision so far from decreasing is actually increasing amongst the older children.

"The facts seem to call for further investigation, and teachers should be asked to take all possible precautions against eye-strain. It is significant that the increase is greatest in the case of girls. In my opinion more care is needed with regard to sewing and fine work, especially on dark or gloomy afternoons in winter, to see that the lighting is adequate, and if it is not, then the lesson should be changed to something involving less strain.

"Blepharitis is still very common, 117 cases being noted at the routine examinations, but many of these were under treatment.

"Conjunctivitis was seen in only 17 children, the smallest number for some years."

Dr. Mary Sheridan records her findings as follows :—

	Boys.	Girls.
"Local Inflammatory Conditions (Blepharitis, Conjunctivitis, etc.) 1.2 per cent. of all cases	30	29
Squints, 1.3 per cent. of all cases	34	30

"Many parents are criminally careless of having squints attended to; and even if an Oculist has been consulted frequently indulge their child's dislike of wearing spectacles and of covering treatment. They are usually much more concerned

about the inflammatory conditions as these cause pain, discharge, photophobia, and other obvious symptoms which demand immediate treatment.

"The percentage of defective vision was large—8.7 per cent. of all children. The most remarkable thing was that the number of cases of defective vision was more than twice as common in girls as in boys.

Boys.
139 (5.1 per cent. of all boys).
Girls.
298 (11.9 per cent. of all girls).

"It would be interesting to discover to what these results may be attributed, since I do not think such a marked difference can be accidental. I have asked in girls' schools how they are accustomed to spend their free time, and think that perhaps the indoor life they lead, with its large proportion of close work, knitting, darning, sewing, etc., may have something to do with it. Boys spend a much more active time out of school hours. Both sexes attend cinematograph displays with equal enthusiasm. Girls, of course, as a whole are more studious between the ages of 11—14 (when most visual defects are discovered) than boys are, and perhaps they read more for recreation. In many places—Moreton for instance, and all the small villages, they have to rely upon candles and paraffin lamps for their sole illumination after sunset, and any child who reads largely out of school time in bad light must eventually suffer for it.

"Parents are frequently actively hostile to their children wearing spectacles, and although the teachers and nurses urge the necessity of obtaining glasses at least for close work when the doctors have recommended and prescribed them, they remain mulishly obstinate on the point. Frequently the mothers have told me that since their children can see the Church Clock from across the road, which they themselves cannot do, or can read a newspaper quite well when it is held close to their eyes, that it is ridiculous to say they have defective vision. This in spite of the fact that in their presence it is demonstrated that the child reads the type R. 6/24, L. 6/36, or worse. Also even when the glasses have been provided at the County's expense, they seldom insist upon their children wearing them during school hours, and if they are broken, they will rarely spend the few coppers it costs to have them mended."

Ear Diseases and Defective Hearing.

Defective hearing is recorded in 79 cases and ear discharge in 111 cases. The majority of these troubles dated back to an attack of Scarlet Fever or Measles.

In Dr. Stocks' report the following paragraph occurs :—

"The records of 1,700 'leavers' show that 3.1 per cent. of boys and 3.4 per cent. of girls were partially deaf in one or both ears (for the purpose of these figures children hearing the whispered voice at 20 or at 10 feet have been counted normal, and those who could only hear at 5 feet in one or both ears have been called partially deaf). In 33 children ear discharge was found, or 1.4 per cent. of boys and 2.4 per cent. of girls."

Nose and Throat Diseases.

Enlarged tonsils alone were noted in 257 children, adenoid growths alone in 301 children and in 490 other children both adenoids and tonsils were noted.

Some investigation appears to be needed here as to causation.

Dr. Mary Sheridan offers the following note on these conditions :—

"Tonsils and adenoids singly or both together were found in a very large percentage, 7.8 per cent. of all cases.

Boys, 190 ; Girls, 201.

"All the concomitant symptoms of nasal obstruction, deafness, sore throat, dulling intelligence, etc., were found in varying degrees of severity. Without exception these cases were advised to have the tonsils and adenoids effectively removed, and that as soon as possible. A few cases of hypertrophy following a 'guillotine' operation some years previously were noted. These were advised to have the only sure method —that of enucleation—performed."

Diseases of the Heart and Circulation.

Here we have recorded 125 cases of organic, *i.e.*, established disease, 35 cases of temporary derangement and 166 cases of anæmia.

Dr. W. J. McIvor, who has made a special study of this condition in relation to rheumatism, contributes his findings in an Appendix to this Report. I reproduce this in full because of its intrinsic interest and because I regard the subject as one worthy of much more detailed investigation.

The following notes of Dr. Mary Sheridan on severe heart disease are most interesting :—

"In the numbers given below functional heart disease has been entirely omitted. These cases will be found in the 'Normal Children' section.

"*Severe* heart disease was found in 24 cases, *i.e.*, .5 per cent. of whole examinations.

Boys, 10; Girls, 14.

"Of these 3 were definitely *Congenital* in origin. None of them cyanosed. Of the other 21 cases of *acquired Disability*, 16 showed a clear history of *rheumatism* (usually in the form of chorea or 'rheumatic fever,') 2 were traceable to scarlet fever—which is a similar if not identical infection, and 3 gave no history of either of these illnesses though one had suffered from severe 'influenza' with sore throat.

"These numbers show, I think, the vast importance of early recognition and prolonged treatment of acute rheumatism in children. In about half a dozen cases the parent was not aware of the serious cardiac inadequacy, although the child had been treated throughout the acute stage of the illness, showing that the murmurs are often very late in developing. This is one of those points that indicate very clearly the enormous value of routine medical inspection of school children.

"*In one case*, a girl in Willaston (Wirral) C.E. School, whose heart was enlarged 1 inch to the left, with a double mitral murmur and a definite presystolic thrill, was actually in training for the annual sports. She was the school's best runner! Her increasing breathlessness had been put down to hard training and excitement.

"*Another case*, a boy in Upton R.C., was interesting as being an idiot with a rheumatic and not a congenital cardiac disease. He had recently had a severe attack of pneumonia but had recovered. Throughout his illness his cyanosis had always been marked and his breathing very distressed.

"In School work these rheumatic children usually excel. Indeed I have remarked that the delicate children are often the brightest mentally. The danger of pushing these children's studies beyond their physical capabilities is a very real one. Where the child is definitely over-strung I have always advised a holiday from school for a short period.

"These cases of severe heart disease were all recommended to cease games and drill and to keep under medical supervision. Those who were old enough to understand had their condition explained to them, to emphasise the peril of continued over-exertion. If the parents were not present or lived too far away to be sent for, they were sent full explanatory letters."

Dental Diseases.

The Assistant School Medical Officers discovered 1,988 children suffering from dental disease. This is in addition

to those referred to in the Reports of the School Dentists which I quote later.

Dr. Stocks remarks on this subject :—

"A comparison of the records of over 3,000 leavers of whom over half were examined in 1926 and the others in 1921, shows that the proportion showing more than three teeth decayed, or showing sepsis is actually greater than it was five years ago, (being double in the case of boys). I can only attribute this to the fact that under the former scheme of dental treatment these leavers could have their carious teeth extracted by the School Dentists, and many of them did so, whilst now that attention is concentrated on the younger children these older ones are being left without treatment. The effect of the work on the younger children has not yet reached the children now leaving school. Its effect will be seen in about three years' time."

Dr. Mary Sheridan writes as under :—

"Carious teeth of course are present in a very large percentage of children. These numbers include only those who have 3 or more decayed. Total 9.2 per cent.

Boys, 238; Girls, 223.

"It is notable that the teeth of children in Ellesmere Port (where routine inspections by the dentist are made) are in very much better condition than those of other similar areas (Moreton, etc.) Children as a whole are not very careful about brushing their teeth. The boys, usually, are most neglectful of this duty, in spite of their teachers' frequent reminders. I asked 66 boys in Frodsham (none of them Infants) and found only 3 who brushed their teeth daily. Girls are usually much more concerned about the toilet of the teeth, especially when they reach the senior school and begin to take pride in their appearance. In New Ferry, Chester Road Council Girls' School, every child had healthy well-brushed teeth. It is pleasant for the teachers and medical inspectors to find that their advice has been so conscientiously followed.

"One girl in Ellesmere Port (aged 12 years) was interesting as she told me she had never had her permanent teeth. The temporary ones were present as very small, yellowed stumps, with large spaces in between them. She told me she had been X-rayed twice, but no others could be distinguished in the gums."

The following are the Reports of the School Dentists :—

1. Report by Mr. S. Whitworth.

"Below is my general summary for the year ending

December 31st, 1926. I have grouped my remarks as far as possible to the different tables of figures and in two cases have given a summary at the bottom of the sheets to save referring back as much as possible.

Inspection Sheet.

"During the past year I have re-inspected 1,811 old cases.

"During the past year I have inspected 695 new cases. Total, 2,506.

"Since closing the sheets 92 cases of different ages have been inspected, bringing the numbers up to a total of 2,598 inspected for the year.

"The addition of 695 new cases to my 1925 figures is equal to the addition of a new school of a large size, with the result that some of my schools have had to be missed. The chief additions have been in the new 5 years group and the 6 years. These have accounted for 449 out of the total of 695. This is a condition which will occur annually until a school receives treatment in all the age groups.

"Out of a total of 1,811 re-inspected 1,511 were selected, or 83.4 per cent.

"Out of a total of 695 new cases 619 were selected, or 89.06 per cent.

"These percentages are high but not unusually so in children of these ages. The new cases are higher than the old cases but that is to be expected as no treatment has been given as a rule. In the old cases the percentage is rather high, but in a number of cases the treatment only consisted of small operations which are usually necessary at these ages when a child is changing from temporary teeth to the permanent teeth. One point that I have noticed is the big improvement in the mouths of children where treatment has been given regularly. This should greatly improve the future dentition of these children. The educational value is in my opinion only just beginning to be felt, but I consider this to be the thin edge of the wedge and expect rapid strides now.

Treatment Table (Operations).

"This requires very little comment as the figures speak for themselves. The number of permanent teeth requiring treatment will gradually increase as the ages of the groups increase. From the figures it will be seen that the number of permanent teeth requiring extraction has only increased very slightly but that the number of permanent filling is increasing rapidly. These facts point to one of the great benefits to be got from the scheme. If these permanent teeth were not filled the

probability is that these teeth would be lost during the 12 months following the filling. This fact would in itself cause serious complications and irregularities. In my opinion this is the most important part of the treatment, and the figures give encouragement.

"No general anæsthetics have been used during the year, but local anæsthetics have been used on 2,184 separate occasions. In my opinion this is the most satisfactory method of dealing with children and they do not seem to have any dread of it, usually in fact they ask for it.

"The number of visits paid by the children to the Clinic was 3,032 and the number of children actually treated was 1,235.

Classification and Treatment Table (Clinic).

"Each of these tables has a separate summary attached at the bottom of the sheet.

"The point that strikes me is the improvement in number of healthy gums and decrease in septic gums. In one school the conditions were so bad at my 1925 visit that I brought it to the notice of the Head Teacher concerned. A lecture was given by request of the teacher and a straight talk to the children followed. This was followed up by the teachers during the year and now the position is reversed. What was my worst school for sepsis and dirty teeth is now the best. This shows that with the assistance of the teachers a great amount of work can be done. As a rule teachers are ignorant of the condition of the insides of the mouths, but once this is pointed out they are only too keen to put matters right.

"During the past 12 months I have noticed greater confidence on the part of the parents. At one time the School Dentist was looked upon as a cheap 'Quack Dentist' and there was great opposition to him. This I have had to fight for over 5 years. It was only with the greatest difficulty that I could get the parents to come and see me. Now I find that parents are greatly interested and I get quite a lot coming for advice on the children's mouths immediately I get to a school. As a rule after talking to them I find that they seem quite prepared to leave the work in my hands, but naturally they want to know what I proposed to do first. From conversation with parents I can see that the point that has upset most of them is that they thought it was a scheme of charity. This matter has now been put right by the issue of new white cards. After being away from a school for 12 months I usually find quite a number of enquiries have been made as to when I am

next due and a number of children waiting for me. This to my mind is the correct spirit and shows confidence.

Clinic Sheet.

"1926 Figures.

Desiring Clinic treatment 1,424, or 60.88 per cent.
Desiring private treatment 13, or .56 per cent.
Refusing treatment 902, or 38.56 per cent.

"Included in the refusals are quite a lot who inform me annually that they are going to their private dentist but who do not go. This fact is easily checked by the charts at my next inspection. The actual "private treatments" have had treatment. This accounts for the small number of private treatments and the large number of refusals in comparison."

2. Report by Mr. H. R. Parry.

"In Runcorn and Hoylake I inspected 6 age groups and in Ellesmere Port 5 age groups. Next year, 1927, I hope to inspect 7 age groups in Runcorn and Hoylake and 6 age groups in Ellesmere Port. The great difficulty this year has been the increasing number of children that I have to add to my lists, also as one takes on an older age group the number of permanent fillings to be done obviously increases and these take more time to do than temporary fillings. This year I have been able to inspect and treat all the schools allotted to me in the 12 months. My inspections and numbers of children treated have been greater than last year, 1925, but this fact I put down to two reasons :—

(1) The majority of the children, having been previously treated, did not require so much time spending on them.

(2) I was able to complete the treatment required, in about 75 per cent. of the cases, in only one visit.

"Next year, 1927, I calculate I shall have well over 1,000 children to inspect for treatment, who have never before been inspected or treated, and these, together with all the children previously inspected by me, will obviously require more time and work to carry out the necessary inspection and treatment.

"Generally speaking the work of 1926 has been very similar to that of 1925. The number of permanent fillings has increased but the number of permanent extractions has decreased considerably in my age groups, the majority of the permanent extractions being in the special cases which I have treated. One other difference is very noticeable, namely, children coming to you for the second or third time get used to you, and have more confidence in you and so the work is

much easier and more pleasant; in the same way the Headmasters and Headmistresses who are in every case a great help to us, get used to the ways and methods, and so as we go on from year to year our work becomes much easier and more enjoyable."

3. Report by Mr. S. O. Stewart.

"I beg to report on the Dental work in my area, from 14th June, as follows:—

Work Done.

1. Routine Inspection.

Inspected.		Selected.	
5 years ...	460 ...	5 years ...	204
6 „ ...	638 ...	6 „ ...	355
7 „ ...	517 ...	7 „ ...	291
8 „ ...	514 ...	8 „ ...	330
9 „ ...	495 ...	9 „ ...	290

2. Routine Re-Inspection.

Re-inspected nil. ... Re-selected nil.

3. Specials.

Inspected ... 42 ... Selected ... 21

4. Children	Inspected	...	2654		
	Re-inspected	...	nil.		
	Specials	...	42	... Total	2696
5. Children	Selected	..	1470		
	Re-selected	...	nil.		
	Specials	...	21	... Total	1491
6. Children actually treated				... ...	633
7. Children re-treated ...				... ...	nil.
8. Attendance made by Children for Treatment				...	643
9. Extractions.	Temporary		374		
	Permanent		2	... Total	376
10. Fillings.	Temporary		373		
	Permanent		195	... Total	568
11. Anaesthetics.	Local ...		376		
	General ...		nil.	... Total	376
12. Other Operations.	Temporary		265		
(Silver Dressings).	Permanent		52	... Total	317
13. Scaling ...	...		...	...	38
14. Gum Treatment	...		...	...	22
15. Half-days devoted to	Inspection		132		
	Treatment		79	... Total	211

Supplies of Tooth Brushes and Powder.

"After making several enquiries, I have received samples of the following good, cheap, brushes and powder, which, I consider, should meet the requirements and pocket of all children in my area, except, possibly, the absolute poverty cases, and this means of supply should do away with any excuse for dirty teeth :—

Messrs. Kent & Co., London.

The "Apsley" Brush, wholesale 93/6 per gross, retail 10d.

The "Columbus" Brush, wholesale 82/- per gross, retail 9d.

Messrs. J. H. Read, Ltd., 90, Victoria St., London, S.W. 1.

"Gibb's Toothbrush and Dentifrice," 6/- per dozen, (toothbrush scheme enclosed).

Messrs. Wm. Henderson & Son, Church St., Liverpool.

Japanese Brush, 30/- per gross, retail 3d.

Messrs. Ayrton & Saunders, Hanover St., Liverpool.

(Wholesale).

Tooth Powder. retailed at 5d. per large tin, with prescription on lid.

Prevention of Dental Disease.

"I am sorry to have to report that although curative dental treatment has been going on in this area for over two years, practical *preventive* dental work, if any, is entirely lacking in results in 95 per cent. of cases inspected, and no daily tooth brush habit has been formed amongst the children of 5 years and upwards.

"The fundamental *cause* of dental decay—the food deposit hanging around otherwise good sets of teeth—is not at present being dealt with, and there appears to be no daily practical effort to actually *prevent* dental disease.

"As a general rule, there seems to be not the slightest use in appealing to parents or children, and the only place in which to get the habit formed properly seems to be in the school. Mere words from a Teacher during a Hygiene lesson also seem to be quite useless.

"This want of interest, want of a tooth brush habit, and want of co-operation on the part of the child, throughout a whole year, greatly minimises the benefit derived from the curative dental treatment given, and prevents the Dental Surgeon from making the headway, he might otherwise do, against dental disease.

"Except in cases of bad calcification, which are few, a great deal of the decay I have seen might have been avoided

or at any rate greatly diminished by making the child keep its teeth clean daily.

"Therefore, I cannot too strongly urge the necessity for instituting, as soon as possible, at least five minutes daily compulsory tooth brush drill, for children of *all* ages, and this, started at 5 years, should develop into a daily habit that would remain with the child for the rest of its life.

"I have got into touch with Mr. M. B. Thornhill, of the Educational Department of Messrs. D. & W. Gibbs, Ltd., and in 36 schools I have brought the "Ivory Castle League" scheme and Tooth Brush scheme (copies enclosed), to the notice of the Head Teacher, and have asked him or her to try and get the daily tooth brush habit established in their respective schools.

"All the same, I still urge that compulsory tooth brush drill be instituted (as carried out in other schools), as the best means towards *preventing* dental disease, and establishing the proper daily tooth brush habit in the child.

Operating in Cloak Rooms.

"In many schools a cloak room appears to be considered quite good enough for the Dental Surgeon to operate in.

"These cloak rooms are generally anything but clean, and often have dirty and wet hats and coats hanging round.

"The lighting is very poor, and there is often no means of heating them, in which case they are very cold, and it appears risky to bring young children of 5 years and upwards out of the warm class rooms to sit shivering in a cold damp cloak room.

"These conditions add to the difficulties of operating and do not give a good impression to parents who may possibly wish to attend.

"If this procedure is not in order, I beg to suggest that schools be notified, *from Headquarters*, that a class room must be put at the disposal of the Dental Surgeon for *operative* work."

4. Report by Mr. E. S. Butt.

"The majority of the schools I have visited for the first time, so I am unable to make any comparison. I may say, though, that I was surprised at the neglect of the teeth and their poor state. I did my best, however, to point out the absolute necessity of oral hygiene. I am convinced that the greater number of neglected mouths were chiefly caused

through ignorance, and wherever possible I have informed the parents of the disastrous results of neglected teeth. I am confident that next year will show an increased interest from the parents, and an increased cleanliness in the children's mouths.

"Every possible assistance has been given me by the teachers of the different schools.

"In some cases I have seen notices posted in the schools emphasising the importance of keeping the teeth clean. I think the latter would assist the work enormously if adopted universally.

Tuberculosis.

Definite pulmonary tuberculosis was discovered in only 2 cases though it was suspected in 15 others. Other tuberculous conditions such as affections of glands, bones and joints, skin, &c., were discovered in 38 children.

"Dr. Mary Sheridan reports that she has had 33 cases which showed *definitive* and *active* tuberculous disease.

	Boys.	Girls.
Lungs	9	1
Glands	5	4
Peritonitis	4	7
Bones and Joints :—		
Tarsal	1	—
Spine	—	1
Hip	—	1

"These cases were nearly all attending clinics or hospitals. In cases where the attendance had become lax I advised an immediate return. The parents of these children for the most part are very alive to the dangers of tuberculosis and only too anxious to co-operate.

"The number of cases in which the parents told me there had been old peritonitis, and those in which clear cervical scars demonstrated a successful operation for infected glands, was very large but those are not included in the above figures."

Nervous System.

There were 18 cases of epilepsy reported by the Assistant Medical Officers as attending school. Eight cases of chorea (St. Vitus' Dance) were discovered—all of a very mild character.

Deformities.

Spinal curvature is recorded in 108 cases, Rickets in 14 cases and other deformities such as club-foot, flatfoot, &c.

In this connection Dr. Stocks writes :—

"Signs of past rickets were seen in 125 children at the routine inspections but few were in need of treatment.

"Thirty-four children were found to be pigeon-chested and 28 had a noticeable stoop or were round-shouldered.

"Several cases of talipes were met with, and thirteen cases of infantile paralysis, three involving an arm.

"A rare condition, congenital absence of the left patella or knee-cap, was seen in one child. Amongst other abnormalities and interesting cases seen during the year were cleft palate, congenital dislocation of hips, flat foot, ganglion (several cases), popliteal bursitis and exophthalmic goitre (not common in children).

Dr. Mary Sheridan reports as under :—

"The causes in order of frequency were these :—

	Boys.	Girls.
Old Infantile Paralysis	7 ...	4
Congenital Dislocation of Hip ...	1 ...	3
Old (cured and ankylosed) Tubercular Hip	2 ...	—
Spastic Paralysis	1 ...	1
Talipes	— ...	1
Scoliosis (severe, non-Tubercular)	— ...	1
Congenital Malformation of shoulder and arm	1 ...	1
Birth palsy (arm)	— ...	1
Ankylosed elbow (cause unknown)	1 ...	—
Amputation of leg	1 ...	—
Freidrich's Ataxia	1 ...	—

"Nearly all the Infantile Paralysis cases were under treatment by orthopædic surgeons in Liverpool. All the other cripples were being treated, or had sought expert advice at some period. The girl with Scoliosis (Eastham C.E.) was in a plaster jacket. I excluded her, as the mile walk to school caused great pain, and I recommended an immediate return to the Surgeon.

"I would like to add that, in my opinion a Fund to help the Infantile Paralysis cases to purchase new splints might

with benefit be instituted. In Great Saughall two brothers were wearing splints hopelessly grown out of, because the parent could not afford new ones. In another case an obviously home-made and inaccurate splint was in use. Frequently too, where I have recommended surgical boots for cases of marked flat-foot and weak ankles, I have been told that the price charged renders them impossible.

"Those suffering from the more crippling deformities have been already noted, but others less serious are frequently found. *Rickety* deformities are seen in 1 per cent. of all cases.

Boys.	Girls.
34 ...	20

"The large square rickety head, and the narrow 'pigeon chest' are most frequently seen. Only a few were badly knock-kneed, and none seriously bow-legged, which speaks well for the Orthopædic facilities in the neighbourhood. It is gratifying to note that most of these cases were among older children. The percentage of rickety deformities in the Infant schools is pleasantly low. This is due, in my opinion, to the careful supervision of the Baby Clinics and Nurses. The mothers are becoming increasingly aware of the advantages their children derive from the Infant Welfare Centres, and it is quite rare now to find an 'Entrant's' School Medical Card to which the pink 'Baby' Card is not attached.

"*Developmental Deformities* are fairly common. I have noted the following :—

	Boys.	Girls.
Inguinal Hernia	4 ...	5
Epigastric Hernia	— ...	1
Phimosis	4 ...	—
Undescended Testicle	1 ...	—
Hare Lip	2 ...	1
Cleft Palate	1 ...	2
Nasal Polyp	— ...	1
Defective Recti Abdominis ...	1 ...	—
Cyst of Eyelid	2 ...	—
Slight Malformation of Shoulder...	— ...	1
Premature Menstruation (aged 6) ...	— ...	1

Deformities of Stance.

"Round Shoulders and Postural Scoliosis were fairly common. 1.5 per cent. of all cases.

Boys.	Girls.
37 ...	40

"These were seen specially in children who were weakly or ill-nourished, or who were growing rapidly. Easy exercises to be performed at home were demonstrated. A few parents asked advice about obtaining straps for round shoulders. These I did not recommend as exercises for muscular education are of so much more value than mere mechanical supports, especially as these are usually uncomfortable in the extreme.

"*Flatfoot* severe enough to be noted was seen in .4 per cent. of cases.

Boys.	Girls.
8 ...	12

"Exercises and built-up shoes were recommended."

Thyroid Enlargement and Physical Development.

(By Dr. Percy Stocks).

"A special investigation was undertaken in March, 1926, by Dr. Percy Stocks, Reader in Medical Statistics in the University of London, and Dr. A. V. Stocks, on the relation between thyroid enlargement and physical development. The principal aim was to discover what correlation, if any, existed between enlargement of the thyroid in girls between the ages of 10 and 15 years and various growth factors. To this end some 450 girls were measured in schools at Runcorn, Stockton Heath, Halton, Lymm, Northwich, Barnton, Weaverham, Knutsford and Altrincham.

"The factors measured were the size of the thyroid gland, stature and weight, strength of grip, systolic and diastolic blood pressures, pulse rate and colour of hair and eyes. In addition the Head Teachers kindly supplied information as to proficiency in school work of each girl in relation to girls born in the same year. This work formed only a part of a much larger investigation into the best methods of measurement, the behaviour of the thyroid gland in adolescence, the significance of the so-called physiological enlargements, the geographical distribution of goitre in England and Wales and the causes underlying it and possible means of prevention.

"The mathematical treatment of the data has involved considerable labour which is barely completed as this Report goes to press, and it is not therefore possible or advisable at this stage to give any account of the conclusions to which it leads. It may be stated, however, that new facts were brought to light which it is hoped may be of practical value. The complete results of the research in all its aspects will be

published in the next issue of the 'Annals of Eugenics,' and it is hoped to give a brief resumé of the results of the Cheshire work in next year's Report.

"It is desired to take this opportunity heartily to thank Dr. Meredith Young for kindly granting the facilities for the work, and also the Head Teachers of the schools visited for their cordial assistance."

Mental Deficiency.

Dr. Mary Sheridan reports that she has encountered 69 mentally defective children during her inspections. She writes as under on these cases :—

"These I have divided into three groups.

"Grade I. (Feeble-minded). Those who, although definitely defective mentally, were yet amenable to discipline and teaching, whose scholastic attainments, necessarily elementary, were improving, and who in future may live happy and fairly useful lives if kept under kindly supervision.

Total.		Boys.		Girls.
37	...	25	...	12

"*Three* of these cases are specially worthy of note. Two were the result of Encephalitis Lethargica and both showed the Paralysis Agitans complication.

"I. *A Girl* aged 9 years in Ellesmere Port C.E. School. This child was first brought before me because of her 'hysterical' behaviour in class. She was inattentive, excitable, inclined to burst into tears on the slightest provocation, and seemed obsessed by the idea that her classmates were 'making fun' of her. Her school work, although backward, was not definitely defective then. Her face was somewhat mask-like in repose, but she spoke and laughed readily enough when questioned. I sent specially for the mother, who was not in attendance, but when she came I could obtain only a vague history of severe 'influenza,' at some unknown period.

"About two months later I saw the child again at the Headmistress' request. By this time she showed definite tremors of the eyelids and hands; stood in the typical fashion with drooping shoulders, open mouth, bent knees, lax arms, and stupid eyes with half-opened lids. There was slight paresis of the left face. The speech was slow and slovenly. Her mental condition was very much worse. She was extremely difficult to discipline in class. I excluded the child and recommended treatment at a Special School. The outlook here, I should say, is distinctly bad.

"II. *A Boy* aged 11 years in Malpas. He had been treated in Chester Infirmary about two years ago for Encephalitis Lethargica. In appearance he was very like the later condition of Case I., but his mentality (as I have observed frequently in Hospital Out-Patient Clinics) was of a higher level than his appearance would lead one to believe. His speech, though still very imperfect, had improved very much in the preceding months. He was taking a greater interest in games and reading. This month (January, 1927), I saw him again, this time in school. His stance is much improved, and his intelligence only a year or two below normal—although he is still very slow at figures. His speech is very rapid, and he is apt to run his words together. He is obedient and well conducted.

"III. *A Girl* aged 6 years in Helsby. This child was particularly interesting to me because I had seen her in Dr. Murray Bligh's Out-Patient Clinic at the Liverpool Children's Hospital four years ago, and had then made some notes upon her condition. She was a bad case of Cretinism. At two years old, she was stunted in stature, pot-bellied, and obese. The supraclavicular pads were especially well marked, the limbs short and 'podgy.' The hair was fine, dry, and scanty. Her face was so 'lowering' in expression as to be positively repulsive. She had made no attempt to talk, and could only walk with assistance. She was dull, lethargic, and seemingly lacking in any instincts of affection. She was put upon a course of Thyroid gland treatment, which has been continued since. She still occasionally re-visits the Hospital.

"Now at six years old she is a pretty little child with thick bobbed hair, and clear skin. She is still a little short for her age, but has lost her superabundance of fat. She does drill and dances with the same precision and enjoyment as the rest of the class. She speaks readily when spoken to, (in a somewhat harsh voice) although she rarely volunteers any information. She displays considerable interest in her work, and her personal tastes in colouring, etc., for matting and rush-work are quite definite. She is gradually showing more initiative in work and play. Most wonderful of all she read perfectly for me an unseen portion of her primer ('Let her go up and get it' type of sentence).

"Of course this almost marvellous result has not been attained without infinite patience and understanding on the part of the child's teachers, and I think that to them the greatest credit is due.

"Grade II. (Imbeciles). These children are of a distinctly lower level of intelligence than Grade I., but for the most part give little trouble in school. They can be taught

practically nothing beyond simple words and numbers, and only occasionally learn to read and write. They might improve in Special Schools but will never be able to earn their own living. They can usually be trusted to safeguard themselves against the common dangers of traffic, etc.

Total.		Boys.		Girls.
21	...	9	...	12

"An interesting case I have classed in this Grade is a girl at Hoylake who never speaks, but has been known to utter isolated words, and once a whole phrase, at home. She is quite obedient and willing to do small tasks in school, and her appearance is so normal, and her expression so alert, that she gives one the impression that she *will not* rather than *can not* speak. It is impossible to judge of her mental capacity.

"In two cases in this group the mental condition is largely due to physical disability. One boy is almost completely deaf, and the other is nearly blind. In both it is impossible to apply the ordinary intelligence tests. In Special Schools these might improve considerably.

"Grade III. (Idiots). These children have quite the lowest forms of intelligence, and might be said to be suffering from Amentia. Little can be expected of them in the way of improvement. Eventually they will probably drift into Mental Homes and Asylums.

Total.		Boys.		Girls.
11	...	8	...	3

"Three cases were brought forward as '*Morally Imbecile.*' One boy and one girl were hopelessly degenerate morally and mentally. In both cases the heredity was anything but good. The girl (Ellesmere Port P.M.) especially was a most distressing case, and I consider her only treatment possible is some kind of Mental Home where she may be under constant supervision.

"The third case, a boy of 12 years (Ince Council School) was a much more difficult case to fathom. He was said to be practically normal at school work—I examined his exercise books, and he appeared definitely clever at Arithmetic. But his moral degeneracy was such that he behaved indecently and with utter shamelessness in public, was seemingly incapable of telling the truth even over trifles, and was completely impervious to correction. This type of 'intelligent' mental defective is of far more danger to his schoolmates than the weak-minded 'Mongol' for instance, who, although sometimes so restless and tiresome in class as to necessitate exclusion (*e.g.*,

a boy of 8 years in Thornton Hough Council) is usually sweet-natured, quiet, musical, and affectionate.

"In all cases of Grades II. and III. I recommended Special School or Mental Home treatment. Owing to the distance of these places from the children's home, and the scarcity of accommodation, it is difficult to get the cases removed. The parents, too, are often obstinately opposed to the children going away, and only those who have had to deal with these ignorant, unreasonable, truculent people can realise the futility of argument. If the children are not giving trouble in school I have advised that they should remain there and be taught as much as possible. The teachers are usually very good in devoting much time and energy on these discouraging pupils, keeping them contented and busy, and sometimes obtaining results that are far in advance of what one would have expected.

"*A Special Class* for these backward children might profitably be instituted in one of the large schools in the more populous areas (Hoylake, Moreton, Ellesmere Port, New Ferry) where they could receive individual attention under a specially qualified teacher."

Delicate Children.

Dr. Mary Sheridan submits the following report on this type of child :—

"These are found fairly commonly. I have noted 95, *i.e.*, 2 per cent. of all routine examinations. They may be classed as follows :—

	Boys.	Girls.
1. *Malnutrition*	11 ...	3

"In these cases it was usually discovered that there was a large family, and the father out of employment. Occasionally (2 cases) I noted that the child was the offspring of a former marriage and was suspected of being neglected by the step-parent. It is difficult to ensure treatment of these cases owing to the poverty at home. Questions *re* 'holiday camps,' etc., were asked, and where possible a holiday advised.

2. *Anæmia.*

"Thirty-three cases were found to be markedly anæmic.

Boys.	Girls.
24 ...	9

"Many of those classed under 'Normal Children' showed minor degrees of anæmia, but these numbers indicate the cases where anæmia was the cause of definite physical defect.

Many of them had functional cardiac murmurs. All of them were thin and weakly. In all these cases treatment by tonics, fresh air, suitable food, etc., under a doctor's supervision was recommended.

3. *Debility* (including Pre—or Latent Tuberculosis).

Boys.	Girls.
26 ...	22

"These children were all of the thin, pale, 'nervy' fretful type. Many of them had only recently recovered from a severe illness such as pneumonia, measles, scarlet fever, and bronchitis. About a quarter of the cases I have marked as Pre—or Indefinite Tuberculosis. These were recommended to obtain immediate expert advice from the Clinics.

"It is noticeable that these 'Debility' children are often more than normally intelligent. When, because of their delicacy they are pampered and spoilt by over-indulgent parents—as frequently happens—they become almost neurotic about their own complaints. It would be ludicrous, if one could lose sight of the tragic aspect, to hear a mite of eight or nine dilating upon its symptoms, or to see it eagerly drinking in every word the mother speaks concerning the latest manifestations of its health. In school, as a consequence of this wholesale spoiling and the egotism it induces, the child is often difficult to deal with, selfish, and undisciplined. One case in Higher Bebington Council particularly occurs to me, where a child aged 8 years finally refused to stay in class unless the mother were outside in the corridor, and the door open! This child was exceptionally intelligent, and when I pointed out that his behaviour would lead one to believe that he was mentally defective, he readily agreed to behave normally. For a week he was very good, but since the mother persisted in accompanying him to school he relapsed into his former preposterous habits."

Re-Examinations.

Dr. Mary Sheridan reports that :—

"One hundred and fifty five were made and of these 98 needed treatment. During this year I hope to make more re-examinations than were possible last year. As I was somewhat new to the work and seldom had any time at the beginning to examine more than were actually in the Code Groups I have not seen as many as I would wish."

Dr. Stocks reports on these as under :—

"The number of children re-examined with reference to defects found previously was 816 during the year.

"It may be of interest to summarise the results of following up during the last few years 200 children who were referred for treatment for adenoids or diseased tonsils.

"Of these 128 have been operated upon, or 64 per cent.

"Of the remainder 12 others had been treated in other ways, 8 others had improved without treatment and the remaining 52 had had no treatment and the associated symptoms were no better.

"Taking the cases operated upon it was found that deafness was cured in 13 cases, hearing improved but not normal in 20, and was unchanged in 10 cases.

"Speech defects were cured in 15 and improved in 30.

"Three cases of otorrhœa were cured, and 24 cases of enlarged glands were cured or improved as the result of removal of tonsils or adenoids.

"Other benefits of operative treatment were marked increase in weight in at least 6 cases, cessation of recurrent attacks of tonsilitis in several and of colds in many children."

Minor Treatment Centres.

These have been continued on precisely the same lines as during 1925. The attendances at most of them have increased considerably and in some of them instead of the Nurse being engaged for one hour she is kept employed for a whole morning. All the Clinics are regularly visited by the Assistant School Medical Officers.

Dr. Stocks reports as under on the Clinics in his area :—

"Forty visits were made to these Clinics during the year and the treatment of the children supervised.

"The number of children examined at these visits was 485.

"I formed the opinion that the work of the School Nurses at these minor ailment Clinics was being conscientiously and efficiently carried out with considerable benefit not only to the individual children but also to the schools from which they came.

"The control of ringworm is rendered much easier in a town where there is a centrally situated minor ailments Clinic, and this applies to most other skin conditions and minor eye and ear ailments."

Dr. Mary Sheridan remarks:—

"These are sorely needed especially in the Urban districts such as Ellesmere Port, New Ferry and Moreton. A central Clinic in each of these places could serve several schools (all of them large and increasing every year), and could be inspected at regular intervals by the Assistant School Medical Officer. In Ellesmere Port especially, the necessity for school Clinics is urgent. It is distressing to see the untreated impetigos and the numbers of septic sores and discharging glands without any attempt at dressing or even cleansing being made."

Physical Training.

Report by Mr. Joseph B. Hall.

Boys—

"*General.*—During the past year steady progress has been made with the teaching of Physical Training. A great majority of teachers have worked hard, realising the need of systematic teaching as well as the necessity for making the lessons interesting and attractive to the boys. Physical Training lessons are now enjoyed and the scholars are always eager for the work. A much happier spirit is now to be found in this subject.

"The value of Teachers' Classes and Demonstrations has been proved once more during the year. There have been good attendances at demonstrations, while the work done by the members of the classes has been of a really good standard. Although these classes are the best means of building up a good standard of work, the visits of the Inspectors are essential in order to give further advice and assistance in the schools. Visits have been made to see all members of the classes at work in their own schools, and it has been pleasing to see the enthusiasm they have displayed for the subject. More preparation has been given to the lessons, with the result that correct sequence and definite progression throughout the school is now the general rule. General Activity Exercises should, however, receive more attention, and the more difficult movements should not be omitted. The team system is becoming much more firmly established and many schools have provided distinctive colours for the various teams.

"*Organised Games.*—The increasing demand for Playing Field accommodation shows the interest which is being taken in Organised Games. The number of playing fields for use by Elementary Schools is steadily increasing, and practically all Senior Schools make time-table provision for organised games. Much more use is also being made of school playgrounds, where area and surface permit, but the 'marking

out' necessary, frequently causes some good games to be omitted. It is hoped that in playgrounds which have a suitable surface, permanent markings may be made, and so facilitate the playing of many excellent minor team games. The County Architect is arranging to introduce permanent markings in playgrounds which are being asphalted, by the arrangement of small white stones in the asphalt. A plan of suggested permanent markings has been submitted to him.

"Although football and cricket in their seasons are still the chief games played, it is very satisfactory to note the increase in the number of minor team games which have been introduced, and which, when presented by an enthusiastic teacher, become great favourites with the boys. These games have been dealt with at Teachers' Classes, and opportunities given to teachers to play them. Such games as Circular Pillar Ball, Long Ball, Tower Ball, Volley Ball, Rugby Touch, etc., cannot be too strongly recommended for senior classes. There is a great need in many schools for a progressive games scheme.

"*Swimming.*—In no branch of physical training has there been a more marked advance as that made in swimming instruction. A very great interest is being taken in this subject, both by teachers and scholars. The number of schools attending the bath has greatly increased, and full use is being made of all available facilities in the county. During the season 2,375 boys attended the baths in school hours, the number of certificates gained being 153 1st Class and 497 2nd Class, in addition to 11 Bronze Medallions, 15 Proficiency Certificates, and 6 Elementary Certificates of the Royal Life Saving Society.

"A Swimming Course for Men Teachers was held at the Altrincham Baths during the Summer and was attended by 33 teachers. Great enthusiasm was shown by the teachers and very successful results achieved. A strong request has been made for such a class for the forthcoming season, and arrangements have been made for this, at which modern methods of teaching swimming will be further explained and tuition in life-saving work given.

"*Schools Athletics Associations.*—The various district Schools Athletics Associations throughout the county continue to do very good work on behalf of the scholars. The control of football, cricket, net ball and rounders leagues entails much work by those teachers who take such a keen and active part in these activities, year by year. Good sportsmanship is found to be the dominating feature of inter-school and inter-town contests which have recently been more patronised by the general public. Area Schools' Sports and Swimming

Galas have also achieved much success owing to the untiring efforts of the Athletics Associations."

Report by Miss M. Altham.

GIRLS—

"In every department in the schools satisfactory work has been done on the whole, as regards the 'exercises' in the syllabus, though many teachers would be more inspiring and would help their classes to reach a higher standard of work if they were more particular about the commanding of the exercises, and if they could adopt a more cheerful and bustling manner, and appear to be thoroughly enjoying the lesson themselves.

"In the report on last year's work it was stated that the subject of Organised Games was still in its infancy. During the past year, in schools where the work of senior classes has been seen, special enquiries have been made as to the arrangements for general activity work and for Organised Games, and also as to the amount of apparatus available for use.

"The result of these enquiries shows that the teachers do not realise fully the wide scope of this part of the work, and therefore they have not arranged the general activity exercises and the games period in such a way as to make the fullest use of the team system, without which this work cannot be taken as seniors ought to take it. In many schools, too, the stock of games apparatus is not sufficient for the playing of two or three games at once.

"It was felt that there was now a need of classes for teachers, so that instruction and help could be given in this very important part of the Physical Training scheme. Enthusiasm and willingness to do what was possible was never lacking, but in practically every case there was lack of knowledge as to how to play an Organised Games scheme so that the games period could be used to its fullest extent as a time of progressive training in technical skill in games, in athletic ability, and in what is so much more important 'good sportsmanship' as defined in the syllabus: 'love of fair play, modesty in victory, cheerfulness and good temper in defeat, loyalty to one's side, pluck, determination and perseverance.'

"Classes for teachers have been held in two districts in the county, and it is hoped that similar classes will be held in time, in every district. If the teachers who attended these classes can rouse in their children the enthusiasm they themselves showed, and can inspire them to work as hard and as keenly as they worked at the classes, a very high standard of work will result. These classes are not for senior teachers

only, but for all. It was felt that a course which touched on the work of every class from infants to seniors, including classes in rural schools, would allow each teacher to see her own special work in relation to the whole scheme, and would help all teachers to feel more strongly the need for co-operation in that progressive scheme.

"*Swimming.*—The keeping of register record books has again proved of great value in supplying information as to the results obtained, and also in recording the progress of each child from week to week. Very satisfactory results have been obtained, the percentage of learners, *i.e.*, those who have learnt to swim during the season, being higher than last year. Ninety-eight girls have passed the test for the First Class Certificate, and 204 have qualified for the Second Class or Beginner's Certificate.

"A short course of six lessons has been held for the teachers in one district where it is hoped that children from a senior school will have the advantage of instruction in swimming for the first time during the coming season.

"*Folk Dancing.*—The number of schools in which folk dancing is taught is increasing, and the dancing is enjoyed very much by the children. In rural schools, in addition to making the children more alert, and making their movements more controlled, it has the excellent effect of making the bigger girls and boys overcome feelings of shyness and self-consciousness."

Other Forms of Treatment.

Full details of treatment are given in the Tables at the end of this Report. 4,524 children were found to require treatment for various conditions (exclusive of uncleanliness and dental disease). The following shews briefly the treatment given under certain headings:—

	No. of children treated.
Minor Ailments	2,957
Defective Vision	2,880
Nose and Throat Defects ...	919
Dental Diseases	4,749

Secondary Schools.

These have been inspected as in previous years, 1,446 scholars having been examined, viz., 784 boys and 682 girls. The most noteworthy defects discovered were defective vision, dental disease and certain deformities, notably spinal curvature (118 cases). There is nothing calling for further comment under this heading.

Dr. Mary Sheridan reports as under on the schools in her area :—

"The total number of girls examined was 490. Of these 218 needed attention, but for the most part over very small matters. Very few were found to be suffering from conditions not previously discovered.

"*Clothing* was most suitable. The girls all wore gym. slips and blouses of a sensible pattern. Only one child was wearing excessive clothing.

"*General Condition.*—21 girls, or 4.3 per cent., were found to be slightly under normal as regards their general condition. These were not suffering from definite anæmia or debility, but were thin, highly-strung and pale. In the Secondary Schools the studious girl is apt to overwork in her ambition to qualify for entrance to Universities and Training Colleges, and her health inevitably suffers a little. The parents and teachers recognise the condition, and most of the children were taking emulsion or tonics, and in a few cases school work had already been modified.

"*Skin Diseases* are uncommon. I noted four cases of Acne, and none of any other disease.

"*Teeth* for the most part are in excellent condition, every child taking a pride in brushing and caring for her teeth. In 40 cases (8 per cent.) some small attention was required, fillings being necessary, and occasionally an extraction. One girl had marked pyorrhœa. She had visited a dentist the preceding week, and had made arrangements for treatment.

"*Tonsils and Adenoids.*—14 girls (2.8 per cent.) had enlarged tonsils or adenoids present. About 10 per cent. of children had had the operation for removal of tonsils and adenoids performed during early childhood. These cases were advised to seek advice from a throat specialist, subject to the family doctor's approval.

"*Glands in Neck* were present in only one case. This state of affairs is in marked contrast to the Elementary School conditions, where enlarged glands in the neck occur very frequently.

"*External Eye Diseases.*—3 cases of inflammatory conditions were seen, and recommended for treatment. Only one very severe case of squint was noted, others having been successfully treated.

"*Defective Vision* was common, 66 cases being noted (13.2 per cent.) It will be observed that this is a little higher than the percentage of Elementary School girls suffering from defective vision.

"Thirty girls were wearing suitable spectacles. Of the others about half had been troubled by severe headaches, inability to see the blackboard in class, etc., but had postponed a visit to the oculist; the remainder were aware of slight discomfort and straining, but had not definitely been aware of their defect. All were advised to seek an expert opinion.

"*Heart Conditions* were noted in 19 cases (nearly 4 per cent.) This number includes all types of heart disease, organic and functional. In every case the parent was aware of the condition, and the child was under treatment. Games and drill were already completely abstained from, on the advice of the family doctor, or, in the case of functional disability, exercises at school moderated considerably.

"*Enlarged Thyroid* is fairly commonly seen about puberty. I noted 18 cases (3.6 per cent.) None were serious enough to need interference.

"*Deformities.*—Rickety chests were seen in two cases. The *developmental* conditions noted were these:—

Wry neck	1
Congenital absence left forearm and hand ...	1
Very large lower lip	1
Left breast much larger than right	1

"*Flat-foot* was carefully looked for and found in 27 cases. About five of these were severe, causing pain and swelling of the foot. The others had not suffered much discomfort in spite of the very definite flattening of the arch. Exercises under supervision by drill mistress, and in the bad cases specially 'built-up' shoes were advised.

"*Round Shoulders and Postural Scoliosis* are very common, especially the former. I noted 57 cases of these errors of carriage (11.4 per cent.) Exercises and drill were advised. I noticed that the girls, in sitting down to read, usually bent their heads over their desks or their knees, and seldom sat upright with the book held up. When this 'hunched up' attitude is preserved during study hours for a long time at a stretch it naturally tends to undo all the good achieved in the gymnasium and the playing field.

Remarks.

"*Drill Shoes* are worn all day in school. I do not think this custom advisable, although it is a convenient one from the point of view of quietness and neatness, because the limply soled rubber shoes tend to flat foot, and must be very hot and uncomfortable in summer. Many of the girls have told me

they find the shoes comfortable and easy to wear, but others say they feel the lack of support to the arches very much. In my opinion a leather slipper of the 'ward-shoe' type is the best for school. These have a low heel (to which rubbers may be attached if preferred) and a strong light sole, with a broad comfortable strap to keep the shoe from falling off. This type of shoe can be bought almost as cheaply as the other (5/- to 10/-) and wears much longer.

"*Drill* is given once or twice a week in most of the schools, each lesson lasting for about 30—40 minutes. Drill for 20 minutes every day would be most beneficial if this could be arranged.

"*Nervous Instability* is a common thing to find among these Secondary School girls. The cause is often overwork, but frequently I think insufficient sleep is at the root of the condition. A growing girl who works hard and plays energetically from 9 a.m. until 4-15 p.m., and then does home-work from 6—8 p.m. (or even longer) certainly requires a larger number of hours sleep than an adult working for the same length of time. I have found that the girls rarely go to bed before their parents do, and the older ones often attend late cinematograph shows, theatres and even dances frequently during term time. The teachers impress upon their pupils the foolishness of thus burning the candle at both ends, but naturally the girls, out of school hours, will take as much liberty in this respect as their parents' will allow. Even the oldest girls should be in bed by 9-30 during term time, and the younger ones earlier in proportion to their ages.

"*Dinners.*—An excellent system of providing hot dinners is in operation at all my Secondary Schools except Lymm."

APPENDIX I.

Observations on Rheumatic Infection in School Children.

By W. J. McIvor, B.A., M.B., Ch.B., D.P.H.

"In his recently published book, 'Fundamentals of School Health,' Dr. James Kerr quotes the saying of a certain author, that the way to assure good posture is to hold yourself so that you feel the collar-stud at the back of your neck and look at everyone you meet as if he owed you a dollar. Admirable as the principle is, it is to be feared that its mere inculcation will not always achieve the happy result desired, in the child at any rate—Now in them, as Dr. Kerr writes, posture and balance outweigh all other considerations.

"One welcomes, in this respect, the recommendations of the Board of Education for the provision of a minimum area of playing-ground space per individual scholar.

"The old-fashioned pernicious desk, too, is being gradually replaced by more hygienic equipment.

"Nevertheless errors of posture and balance are so commonly seen as to be disquieting to the observer. It is intriguing to ponder on the nature of their origin, in some of its aspects still largely a mystery. To unravel it, perhaps one would be wise to bear in mind the advice of Sir James Mackenzie when he said, in such a study we must above all things concern ourselves with the very small beginnings of disease. First of all then, the very early recognition of postural defects is not at all difficult, if one learns how and what to look for. A lucid description would aid. The latter I have endeavoured to provide on a former occasion, admittedly with some misunderstanding of one of the basal factors, and so now propose to repeat it with some modifications in a further effort at its delineation. In speaking of certain characteristic attitudes and habits of a particular type of child, I formerly said that the child affected will show, besides the abnormal curvature of the vertebral column, an increase, (this should be 'loss') in the tone of the muscles involved in the maintenance of balance of the head and trunk, and that at times they exert strong tensions—more explicitly, varying degrees of immobility of the spine result). The back may be of board-like stiffness. The rigidity can be elicited by gently tilting the head backwards with one hand while

supporting the back with the other. I also noted that when the condition is marked, the balance of the child can be readily upset, and that its movement, or turning by the hand or a slight push would cause it nearly to fall. It was recalled that one of the effects of rickets was the loss of tone of the muscular system, that the presence of an underlying rheumatic infection, *i.e.*, chorea, more or less latent, may intensify the instability of the equilibrium of posture in these children, so that at times, especially when being interviewed, one noted them instinctively holding on to, or resting a hand on any convenient article of furniture.

"The type of child I was attempting to portray would appear to correspond in one of its features at any rate with that depicted by Dr. Cameron in a recent lecture on Ketonaemia Cyclical Vomiting, etc. (Archives of Disease in Childhood, February, 1927). In children now, ketonaemia is only a symptom of faulty metabolism with various underlying causes and not a pathological entity, and its particular feature to which I wish to make special reference is the loss of tone of the general muscular system, termed Amyotonia.

"Under this heading Dr. Cameron says. Postural defects, because of the striking tonelessness of the whole muscular system, are commonly found. The whole body droops and sags. Instead of being braced by strong muscular support, the body when upright is balanced in the position of least resistance. The normal postural curves of the spine are greatly exaggerated. To balance the weight over the stance, the shoulders are carried backwards, and the resulting lordosis throws the abdomen into undue prominence. A secondary compensatory curve in the cervical region is necessary to bring the eyes into line. The weight of the dependent arms brings the shoulders forward and averts the vertebral borders of the scapulæ. The feet are apt to be flat, the knees a little hyperextended. The child tends to lean against any support which offers—his mother, a table, the wall. His power of making that sudden movement of recovery, which may be necessary to prevent a fall, is very defective. A slight push may be all that is needed to upset his balance.

"Dr. Cameron issues a grave warning that ketonaemia in some of its aspects is liable to be confused with subacute rheumatic infection, and often wrongly diagnosed and treated as such, whereas their methods of treatment differ widely.

"Great care must be exercised then in distinguishing two conditions possessing features in common. As regards the amyotonia, (and it too is found in still other circumstances), when rheumatic infection *is* definitely grafted on it, a by no

means rare occurrence, we see a more complicated clinical picture of loss of muscular tone, one coloured by more or less involvement of the fibrous tissue articulations and nervous system by the infection. This results in, among other things, the super-addition of the rigidity already noted.

"In recounting other features of ketonaemia, Dr. Cameron relates how a functional murmur, tumultuous action of the heart, breathlessness, aches and pains in the limbs, etc., may cause the physician unjustifiably to diagnose a dilated heart and treat the patient by rest in bed for a long period with harmful effects.

"It behoves one then in the examination to make certain at least that there really is dilatation of the heart since it is our sheet-anchor in the diagnosis of disease of that organ. Dr. Carey Coombs in his book on Rheumatic Heart Disease describes how its violent action during an acute attack can visibly lift the ribs of a child sufferer. Palpation similarly will reveal the exceptional force of the beat too in more or less chronic cases of children during routine examination at school or clinic. Deep percussion and inspection will confirm the evidence of an abnormally large heart.

"Other well-known physical signs of organic heart disease on which some reliance may be placed, need only be briefly alluded to, such as the presence of a thrill, of murmurs characterised by a certain quality and tone, and by their relation in point of time to the normal heart sounds and the various modifications of the latter. The importance of the examination at times of the prone patient, the search for adventitious sounds in every position of respiration, and the value of the exercise tolerance test in eliciting them may be emphasised.

"The unstable nature of the nervous system even of a normal child may render many data relating to it equivocal in their interpretation, *e.g.*, vasomotor disturbances; but the objective sign of chorea remains sure ground on which to pin one's faith that active rheumatic infection must be dealt with in the case. It may be latent or manifest. Failing the obvious presence of typical general involuntary movements of the body, examination of the tongue may reveal or almost exclude latency, or even by their grossness determine the impending onset of a more acute attack.

"I may seem to have needlessly enumerated certain classical aspects of the infection and in atonement therefore, the counsel, with all gratitude, of Dr. Poynton, (*vide* same issue of Archives quoted above), may be offered.

"There are occasions when it is advisable to keep on the beaten track and drive home the essential features of classical cases, and equally there are occasions when it is useful to imagine what great fields there are before future investigators. To quote again, the difficulties in finding and clearing any path by which the various morbid conditions included under the general term of 'rheumatism' can be either linked up to each other or definitely separated, present a great problem in practical medicine. For this reason it must be a cardinal principle to endeavour to make some definite base from which further explanations can be undertaken and to which return can be made for a fresh start, should these prove unsuccessful. This is the essential reason for establishing a definite disease, the acute rheumatism of childhood, and I am of opinion that in so far as any disease is an entity, this acute rheumatism is definite. True it may shade off in many directions, but the mean of numberless observations is a morbid condition with a well established pathological anatomy and clearly recognised cardinal symptoms. The study of such a disease may be directed to the clear exposition of its classical features, its course, prognosis and treatment; or again may be directed to the more unusual cases from the standpoint of their bearing upon the wider problem of rheumatism. They may possibly give to some investigator who is carrying on the exploration of rheumatism in general some hint which may lead to further advances.

"Personally in this note I am concerned with the more usual type of case, the delicate child encountered during school life, and hope to draw some general conclusion regarding them.

"It is often difficult to fathom the reason of their lack of vigour.

"Some of them 'can only be described as weak all through,' a definition I owe to Dr. Meredith Young.

"Others, no doubt, are in the category alluded to by Dr. Cameron.

"But there still remains a group in which in my experience undoubtedly rheumatic infection is found superimposed, but whether in the relation of cause, effect, merely a coincidence, or due to some common factor is open to dispute.

"My own view inclines to the existence of a predisposing condition in common.

"In Dr. Poynton's further words, no thoughtful observer who accepts acute rheumatism as infective in origin can doubt

that in this disease there is also probably some peculiar metabolism, whether innate or produced by the poisons linking themselves into the very tissue cells of the patient.

"Similarly my suggestion is that there may be an antecedent as well as intercurrent metabolic disorder bearing on the malady.

"I have already mentioned the well-known fact that rickets presents as one of its manifestations a state of loss of tone of the general muscular system, and it is the rachitic diathesis that I identify with this defective metabolism. Of the ultimate origin of rickets we have some inkling moreover.

"The postulate then being that the phenomenon of rickets may at times be the precursor of rheumatic infection in children as well as of postural defects, corroboration or otherwise might be expected from a practical application of the principle.

"The absence of the anti-rachitic vitamin D from the diet is now known to be the cause of rickets. Its addition to the food can prevent or cure it. This can be most readily accomplished by the administration of cod-liver oil. I think there can be no doubt that the elimination of rickets from infancy would scarcely fail to lessen the incidence and severity of rheumatic infection in after life, if only by increasing the natural resistance of the body to it. Since the baneful effects of rickets in early life are known to be perpetuated through later years, the further assumption is that anti-rachitic measures would be of service in rheumatism. Briefly then cod-liver oil appears to me possessed of almost a specific action in certain cases of sub-acute rheumatic infection in school children, always assuming that the diagnosis is correct. Following an adequate course of it, though the influence of other factors cannot be excluded, there is often seen, *pari passu* with diminishment of the frequency, of rheumatic exacerbations, a marked improvement in the general health and physique. This is evidenced by the lessening of, or even disappearance at times, of cardiac dilatation and of the postural defects.

"For sub-acute rheumatism we have had practically no drug of ascertained value in the past, and cod-liver oil, with all necessary safeguards and controls would seem worthy of a more extended trial. If my observations are borne out, in it we have a forgotten weapon in our armoury with which to take and retain the initiative on a foe whose manner of attack is frankly elusive and our defence in a like quandary."

W. J. McIVOR.

April 19th, 1927.

APPENDIX II.

STATISTICAL TABLES.

Public Elementary Schools.

Table I.—Return of Medical Inspections.

(A.) Routine Medical Inspection.

Number of Code Groups Inspections—	
Entrants	7024
Intermediates	4988
Leavers	6291
Total ...	18303
Number of Routine Inspections	301

(B.) Other Inspections.

Number of Special Inspections	*6917
Number of Re-inspections	2065
Total ...	8982

* This figure includes examinations by Doctors at Eyesight and Minor Ailment Clinics, examinations as to suitability for open air swimming and for Employment Certificates.

Table II.

(A.) Return of Defects found by Medical Inspection in the year ended 31st December, 1926.

Defect or Disease.	Routine Inspections. No. of Defects requiring Treatment.	Special Inspections. No. of Defects requiring Treatment.
Malnutrition	21	4
Uncleanliness	402	83
Skin—		
Ringworm—		
Scalp	39	110
Body	3	89
Scabies	16	53
Impetigo	138	1020
Other Diseases (Non-Tuberculous)	34	83
Eye—		
Blepharitis	174	181
Conjunctivitis	12	41
Keratitis	–	10
Corneal Opacities	–	59
Defective Vision (excluding Squint)	1448	1361
Squint	74	345
Other Conditions	6	97
Ear—		
Defective Hearing	64	15
Otitis Media	67	34
Other Ear Disease	10	47
Nose and Throat—		
Enlarged Tonsils only	242	15
Adenoids only	284	17
Enlarged Tonsils & Adenoids	457	33
Other Conditions	57	31
Enlarged Cervical Glands (Non-Tuberculous)	113	4
Defective Speech	6	2
Teeth—Dental Diseases	1905	83
Heart and Circulation—		
Heart Disease—		
Organic	89	36
Functional	27	8
Anæmia	156	10
Lungs—		
Bronchitis	189	4
Other Non-Tuberculous Disease	5	–
Tuberculosis—		
Pulmonary—		
Definite	2	–
Suspected	12	3
Non-pulmonary—		
Glands	14	2
Spine	–	–
Hip	1	–
Other Bones and Joints	2	–
Skin	7	–
Other Forms	10	2
Nervous System—		
Epilepsy	12	6
Chorea	7	1
Other Conditions	1	–
Deformities—		
Rickets	12	2
Spinal Curvature	106	2
Other Forms	54	–
Other Defects and Diseases	190	20

(B.) Number of individual Children found at Routine Medical Inspection to require Treatment (excluding Uncleanliness and Dental Diseases).

	Number of Children.		Percentage of Children found to require Treatment.
	Inspected.	Found to require Treatment.	
Code Groups—			
Entrants	7024	1599	22·6
Intermediates ...	4988	1448	29·0
Leavers	6291	1406	22·3
Total (Code Groups) ...	18303	4453	24·3
Other Routine Inspections	301	71	23·0

TABLE III.—Return of all Exceptional Children in the Area.

			Boys.	Girls.	Total.
BLIND (including partially blind).	(1) Suitable for training in a School or Class for the totally blind ...	Attending Certified Schools or Classes for the Blind ...	9	5	14
		Attending Public Elementary Schools	2	0	2
		At other Institutions ...	—	—	—
		At no School or Institution ...	6	7	13
	(2) Suitable for training in a School or Class for the partially blind	Attending Certified Schools or Classes for the Blind ...	3	2	5
		Attending Public Elementary Schools	17	20	37
		At other Institutions ...	—	—	—
		At no School or Institution ...	2	3	5
DEAF (including deaf and dumb and partially deaf).	(1) Suitable for training in a School or Class for the totally deaf or deaf and dumb ...	Attending Certified Schools or Classes for the Deaf ...	17	9	26
		Attending Public Elementary Schools	5	4	9
		At other Institutions ..	—	—	—
		At no School or Institution ...	3	4	7
	(2) Suitable for training in a School or Class for the partially deaf	Attending Certified Schools or Classes for the Deaf ...	4	2	6
		Attending Public Elementary Schools	10	14	24
		At other Institutions ...	—	—	—
		At no School or Institution ...	—	—	—
MENTALLY DEFECTIVE.	(1) Feeble-minded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children..	10	7	17
		Attending Public Elementary Schools	160	136	296
		At other Institutions ...	—	—	—
		At no School or Institution ...	26	21	47
	(2) Notified to the Local Control Authority during the year ...	Feeble-minded	2	3	5
		Imbeciles	14	17	31
		Idiots	2	2	4
EPILEPTICS.	Suffering from severe epilepsy -	Attending Certified Special Schools for Epileptics ...	3	1	4
		In Institutions other than Certified Special Schools ...	—	—	—
		Attending Public Elementary Schools	2	1	3
		At no School or Institution ...	4	4	8
	Suffering from epilepsy which is not severe ...	Attending Public Elementary Schools	22	23	45
		At no School or Institution ...	2	3	5
PHYSICALLY DEFECTIVE.	Infectious pulmonary & glandular tuberculosis ...	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	9	17	26
		At other Institutions ...	—	—	—
		At no School or Institution ...	7	8	15
	Non-infectious but active pulmonary and glandular tuberculosis ...	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	9	15	24
		At Certified Residential Open-Air Schools	—	—	—
		At Certified Day Open-Air Schools	—	—	—
		At Public Elementary Schools...	25	15	40
		At other Institutions ...	—	—	—
		At no School or Institution ...	16	21	37

TABLE III.—continued.

			Boys.	Girls.	Total
PHYSICALLY DEFECTIVE.	Delicate children (*e.g.* pre-or latent tuberculosis, malutrition, debility, anæmia, &c. ...	At Certified Residential Open-Air Schools	7	8	15
		At Certified Day Open-Air Schools	—	—	—
		At Public Elementary Schools ...	387	334	721
		At other Institutions ...	—	—	—
		At no School or Institution ...	18	20	38
	Active non-pulmonary tuberculosis ...	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board ...	35	17	52
		At Public Elementary Schools ...	29	32	61
		At other Institutions ...	—	—	—
		At no School or Institution ...	3	4	7
	Crippled Children (other than those with active tuberculosis disease) *e.g.* children suffering from paralysis, &c., and including those with severe heart disease ...	At Certified Hospital Schools (Shropshire)	2	3	
		At Certified Residential Cripple Schools	1	—	1
		At Certified Day Cripple Schools...	—	—	—
		At Public Elementary Schools ...	243	287	530
		At other Institutions	—	—	—
		At no School or Institution ...	14	23	37

Table IV.—Return of Defects Treated during the year ended 31st December, 1926.

Treatment Table.

Group I.—Minor Ailments (excluding Uncleanliness, for which see Group V).

Disease or Defect.	Number of Defects Treated, or under Treatment during the year.		
	Under the Authority's Scheme.	Otherwise.	Total.
SKIN—			
Ringworm—Scalp	101	27	128
Ringworm—Body	76	9	85
Scabies	52	17	69
Impetigo	943	198	1141
Other Skin Disease ...	62	29	91
MINOR EYE DEFECTS ... (External and other, but excluding cases falling in Group II.)	222	66	288
MINOR EAR DEFECTS ...	126	106	232
MISCELLANEOUS ... .. (*e.g.* Minor injuries, bruises, sores, chilblains, etc.)	862	61	923
Total ...	2444	513	2957

Group II.—Defective Vision and Squint (excluding Minor Eye Defects Treated as Minor Ailments—Group I.).

Disease or Defect.	Number of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to Refraction by Private Practitioner or at Hospital apart from Authority's Scheme.	Otherwise.	Total.
Errors of Refraction (including Squint). Operations for Squint should be recorded separately in body of Report	2494	164	222	2880
Other Defect or Disease of the Eyes (excluding those recorded in Group I.) ...	—	—	—	—
Total ...	2494	164	222	2880

Total number of Children for whom Spectacles were prescribed—

(*a*) Under Authority's Scheme ... 1361

(*b*) Otherwise 219

Total number of Children who obtained or received Spectacles—

(*a*) Under Authority's Scheme ... 948

(*b*) Otherwise 162

Group III.—Treatment of Defects of Nose and Throat.

NUMBER OF DEFECTS.				
Received Operative Treatment.			Received other forms of Treatment.	Total Number Treated.
Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from Authority's Scheme.	Total.		
522	116	638	281	919

Group IV.—Dental Defects.

(1) Number of Children who were

(*a*) Inspected by the Dentist :—

	Aged			Total.
Routine age Groups	5	...	1890	
	6	...	3337	
	7	...	2971	
	8	...	1557	
	9	...	1744	
	10	...	857	
				12356
Specials				396
				12752

(*b*) Found to require Treatment				... ...	8857
(*c*) Actually Treated				... ...	4749
(*d*) Re-treated during the year as the result of periodical Examination				... ...	2498
(2) Half-days devoted to Inspection		...	391		
„ „ Treatment		...	1230	Total	1621
(3) Attendances made by Children for Treatment				...	7754
(4) Fillings—	Permanent Teeth	...	1075		
	Temporary Teeth	...	2993	Total	4068
(5) Extractions—	Permanent Teeth	...	273		
	Temporary Teeth	...	10969	Total	11242
(6) Administrations of general Anæsthetics for Extractions					—
(7) Other Operations (Silver Dressings)—					
	Permanent Teeth	...	162		
	Temporary Teeth	...	1357	Total	1519
Scalings					427
Gum Dressings					272

Group V.—Uncleanliness and Verminous Conditions.

(1) Average number of visits per School made during the year by School Nurses	6
(2) Total number of Examinations made of Children in the Schools by School Nurses	145674
(3) Number of individual Children found unclean ...	2465
(4) Number of Children cleansed under arrangements made by the Local Education Authority ...	—
(5) Number of Cases in which Legal Proceedings were taken—	
(*a*) Under the Education Act, 1921 ...	—
(*b*) Under School Attendance Bye-Laws ...	—

APPENDIX III.

STATISTICAL TABLES,

Secondary Schools.

Secondary Schools.

TABLE I.—Shewing Number of Children Examined at Different Ages.

															Total.
Ages	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Boys	—	—	5	16	36	41	99	202	154	54	45	72	29	31	784
Girls	—	—	44	26	36	50	99	180	74	24	38	53	34	24	682
Totals	—	—	49	42	72	91	198	382	228	78	83	125	63	55	1466

Secondary Schools.

Table II.—Shewing Nature of Defects referred to for Treatment and cases where Defects were Remedied.

Defect or Disease.	Referred for Treatment.	Received Treatment.
Malnutrition	—	—
Uncleanliness—		
Head	5	5
Body	—	—
Skin—		
Ringworm—		
Head	—	—
Body	—	—
Scabies	—	—
Impetigo	1	1
Other Disease	5	5
Eye—		
Defective Vision or Squint	110	92
External Eye Disease	10	8
Ear—		
Defective Hearing	1	1
Ear Disease	1	1
Teeth—		
Dental Disease	128	103
Nose and Throat—		
Enlarged Tonsils	12	9
Adenoids	7	5
Defective Speech	1	1
Tonsils and Adenoids	7	6
Other Conditions	4	3
Heart and Circulation—		
Heart Disease—		
Organic	6	3
Functional	1	1
Anæmia	12	10
Lungs—		
Pulmonary Tuberculosis—		
Definite	—	—
Suspected	—	—
Chronic Bronchitis	2	2
Other Disease	—	—
Nervous System—		
Epilepsy	—	—
Chorea	—	—
Other Disease	—	—
Non-Pulmonary Tuberculosis—		
Glands	—	—
Bones and Joints	—	—
Spine	—	—
Hip	—	—
Other Forms	—	—
Rickets	—	—
Deformities—Spinal Curvature	70	48
Other Forms	42	20
Other Defects or Diseases	6	5