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Annual Report

TO THE

EDUCATION COMMITTEE,
Swinton and Pendlebury

(CHAIRMAN: COUNCILLOR EDWARD L. BARRITT)

BY THE

SCHOOL MEDICAL OFFICER
(DR. H. C. MULHOLLAND),

For the Year ending Dec. 31st, 1921.

INDEX.

Blind, Deaf, Defective and Epileptic Children	27
Clinic Work, Statement of,	6
Co-operation of Parents	26
Co-ordination with other Agencies	7
Crippling Defects	19
Dental Defects	19
Employment of Children and Young Persons	27
Following Up	22
Infectious Disease :—Exclusion of Contacts	19
Medical Inspection in Schools	9
Medical Inspections :— Findings at,	
Eye disease and Vision	15
Ear Disease and Hearing	18
Minor Ailments	11
Skin Disease	14
Tonsils and Adenoids	13
Tuberculosis	14
Uncleanliness	10
Uncleanliness Table of	12
Mouth-Breathing in Children	18
Meals, Provision of	25
Open-Air Education	23
Physical Training in Schools	25
Statistical Summary	4
Staff of the School Medical Service	5
School Oculist, Report of	16
School Hygiene :—Sanitary Accommodation	7
Baths	26
School Closure	20
Schools, Diphtheria in	20
Summer Time Act	29
Tables Board of Education	30

To the Chairman and Members of the Swinton and
Pendlebury Education Committee.

I have the honour to submit to you the Annual Report on the School Medical Service for the year 1921.

No considerable dislocation of work has occurred during the year, and as far as possible the work has, since my appointment as School Medical Officer in September, 1921, followed the same lines as those of my predecessor in office, Dr. W. Stewart Stalker, to whose ability and administrative capacity, the Authority is indebted for a policy in School Hygiene at once comprehensive and effective.

The staff is well equipped and devoted to the service. Much valuable work has been accomplished during the year as a perusal of the following pages will shew. Your attention is especially invited to the Report of the School Oculist, and to my remarks upon Mouth Breathing in school children, Open Air Education, and the prevention of Diphtheria.

I am grateful for the help and co-operation of my brother Officers in this and other departments, and take the opportunity to thank the Committee for their welcome to me, and for their sympathy with my views and efforts.

I have the honour to be,

Your obedient Servant,

H. C. MULHOLLAND,

School Medical Officer.

Statistical Summary.

Total Number of Schools—

Provided—Elementary Ordinary	..	..	..	2
Provided—Open Air	..	..	..	1
Non-Provided	..	..	..	9

Accommodation—

Provided Schools	..	..	..	..	..	..	1,508
Non-Provided Schools	..	..	..	..	..	..	3,700

Average attendance for last completed School year	..	4,024
Number of children under five years of age on books	..	417

Rateable value for Education Purposes	..	..	£124,842
Education Rate	..	..	Swinton 3/5, Pendlebury 3/2
Yield of 1d. rate for Aid grant purposes	..	..	£517
Cost of Medical Inspection to 31st March, 1921	..	..	£1361

Income limit for meals 25/- for the first two people
in family, and 6/- per head afterwards.

Staff of the School Medical Service.

School Medical Officer & Medical Officer of Health :

H. C. MULHOLLAND, M.B., D.P.H.
(Appointed September, 1921.)

Consulting Ophthalmologist :

WM. STIRLING, M.D., O.B.E.

School Nurses :

MISS M. J. METHVEN.
MISS E. BANKS.

Clerks :

MR. J. FLOWER.
MISS D. HOLLINSHEAD.

(Also engaged upon Public Health duties.)

W. Stewart Stalker, M.D., D.P.H., School Medical Officer for the Authority since 1913, ceased duties in August, 1921.

School Clinics.

The School Clinics are held daily at the Council Offices, from 9-10-30 a.m. The School Medical Officer and School Nurses are in attendance during each session. At the clinics, children attend for Inspection and Treatment, and parents have an opportunity to consult the Medical Officer.

A considerable number of parents bring their children for this object, and many children are referred by teachers, school attendance officers, and others. All children requiring treatment are in the first instance referred to their own family doctor.

A special clinic for diseases of the eye, and defective vision is held once fortnightly. Dr. Stirling, the Consultant Ophthalmologist appointed by the Authority, is in attendance, and a special fitter is present to see that all glasses required, are supplied according to his directions.

An idea of the work undertaken, and accomplished at the School Clinics will be gained from the following summary.

Statement of Clinic Work.

(INSPECTION AND TREATMENT.)

	BOYS.	GIRLS.	Times Inspected
Nose and Throat Affections ..	57	66	370
Non-Tubercular Adenitis	9	7	39
External Eye Disease	47	47	250
Squint	29	19	100
Defective Vision	42	63	285
Deafness and Otorrhoea	44	28	222
Mentally Defective	3	—	8
Heart and Circulation	12	14	73
Respiratory Affections	19	25	127
Nervous System	7	10	29
Non-Pulmonary Tuberculosis ..	—	—	—
Rickets	2	1	12
Skin Diseases	183	125	683
Miscellaneous	87	119	652
Totals	541	524	2850

CONDITIONS TREATED.	NUMBER OF TREATMENTS.	
	BOYS.	GIRLS.
Eye Inflammation	794	934
Otorrhœa, Deafness, etc.	913	1193
Skin Affections :—		
Ringworm of the scalp	396	31
Ringworm of the body	92	32
Impetigo	840	601
Scabies	139	143
Other Skin Disease	934	269
Miscellaneous	141	41
Totals	4249	3244

Co-ordination of the School Medical Service with other Agencies.

The School Medical Service in its work, whether administrative or executive, is but a link in the chain of supervision and care which the Council exercises over the child population from earliest infancy to entry upon factory and workshop life. It is most intimately associated with the work of the Infant Welfare Centre, the Juvenile Employment Committee, and Factory Surgeon.

Debilitated and other children requiring care and treatment have thus as a rule obtained necessary attention before entering school, and are known to the staff of the School Medical Service.

There are over 400 children under 5 years of age on the School registers. These children are under the supervision of the staff. The co-operation of the other agencies for the welfare of young children is intimate and cordial.

SCHOOL HYGIENE.

This matter has been fully dealt with in previous reports (See Report of the S.M.O. for 1920).

Sanitary Accommodation.

The Privy Midden system exists in one school. This system is most objectionable from a health point of view. Trough closets with automatic flush are to be found in

several schools. This method is less open to condemnation, but in practice is frequently found a nuisance. The ideal type of closet is a pedestal with separate flush.

Furniture.

A considerable number of multiple seated desks without back rests still exist. The habitual use of such is prejudicial to the physique of the children.

Ventilation and Lighting.

Defective ventilation is not uncommon in the older schools from insufficient window space, or windows not made to open. Also the lighting of many of the classrooms in certain schools is poor, owing to the windows being too small or too far above the floor level to serve the purpose for which they are intended.

Heating

Is defective in some of the schools. In some, stoves are made use of for heating purposes. These do not assist ventilation, and are liable to give off poisonous gases.

^aCloakroom Accommodation.

This is unsatisfactory in some of the older schools, and there are instances where the arrangements for hanging clothes involve the risk of dissemination of infection, should such exist.

Playgrounds.

Where these are not paved or asphalted, and where insufficiently drained, it is impossible to expect a high standard of cleanliness in the school, or to keep the children's feet dry in wet weather.

It is in the school that the basis of education in hygiene is laid. The fruits of this education will in after years be a help or a hindrance to the work of the Health Department in all its spheres of activity, and no amount of talking or lecturing will give the child a health ideal.

What he absorbs and what he will ultimately practice is what he learns by example.

The insistence upon cleanliness of the person of the child will develop the habit of cleanliness of the adult. Scrupulous cleanliness in the school will lead to a similar cleanliness in the home.

Closed windows with defective illumination and lack of regard for fresh air will be followed by similar conditions in the home, for the child of to-day is the householder of to-morrow.

Obsolete and dirty lavatory and sanitary conveniences in the school are a danger to present health. They will be a life-long danger to the child who never cultivates at school the use of, and the desire for better things.

Much remains to be accomplished upon the above lines. Several of the schools are unsatisfactory from the stand point of structure, window space, cloakrooms, sanitary conveniences and lavatory accommodation. These defects are remediable and their removal will aid the teachers in the cultivation of a hygienic habit in the children.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The arrangements in force are briefly as follows :—

The Head Teacher is given notice before a proposed examination of children, and parents are invited by them to attend at the examinations which are conducted by the School Medical Officer and School Nurse in the school, during school hours. A complete physical examination is made of each child in the age groups 8 and 12. Entrants of whatever age are also similarly examined. These institute the Routine Examinations.

Special examinations are also made in the school. These include children re-examined for some defect, or children whose examination is requested specially by the teacher or parents. Children requiring detailed examination are referred occasionally to the school clinic, or where a consultant's opinion is required, arrangements are made accordingly.

The Board's Schedule of Medical Inspection has been completed during the year in all the schools.

Crippling defects in School Children are ascertained chiefly by being referred by the school teachers, parents, or other interested sources. Many come to the notice of the School Medical Officer at the Inspection, and where children before entering school, had been in attendance at the Infant Welfare Centre, the records are passed on to the School Authority. The importance of early recognition of defects is, I think, becoming generally recognised, and increasing use is made of the School Medical Service, which is no longer regarded as an agency existing only for the cure of disease. The danger does exist, however, that too much emphasis should be placed on the remedial rather than the preventive scope of the department's activities.

Medical Inspection in the schools interferes with school arrangements to an extent partly depending upon provision of accommodation. Where possible, a teacher's room is made use of, but in several of the schools, this is not possible, and a classroom has to be utilised for purposes of examination. This involves crowding in some other classroom when the weather is unsuitable for outdoor classes. On the whole the dislocation of work for the short periods necessary, cannot be considered of great importance.

When children of the school leaving age are examined, they are graded according to their fitness for work. Parents whose children are defective are then advised of the work which it is considered their children might be put to, and all parents are invited to consult the School Medical Officer, who is also Factory Surgeon, regarding the suitability of a proposed occupation for their children.

Findings at the Medical Inspection in Schools, and arrangements for treatment.

(a) Uncleanliness.

At the Routine Inspections only 13 were referred for cleansing treatment, and three referred for observation. Of those previously known to the staff or referred to them for habitual or occasional uncleanliness, 320 were referred for treatment, and 452 kept under frequent observation. These figures bear eloquent testimony to the work per-

formed under this head by the school nurses. On the whole I consider the condition of the children compares favourably with other areas. Constant supervision and constant attention are, however, necessary to secure and maintain these results, as is evidenced in the marked contrast in the cleanliness of the children after holidays, when they have been free for a time from observation.

It is our endeavour to make as frequently as possible a complete examination of each child in attendance at the schools, for cleanliness of the person and clothing.

During the past year, two such Routine Inspections in each school have been made by the School Nurses. As a sequel to these visits, frequent further visits to schools and homes have been made to secure a remedy in cases defective under this heading, and to maintain a satisfactory state of cleanliness. Where necessary the services of the Health department are utilised to secure cleanliness of the home.

Cleansing is carried out at the Cleansing Station or the School Clinic. It is found possible to cleanse all heads, however severely infested, at one sitting, but parents are not always willing to acknowledge their responsibility for the state of the childrens' hair, nor eager to submit them to treatment, whilst not a few prefer to see their children verminous, rather than see them cropped, the only really effective remedy within their own power when the condition has become extreme.

The conditions found at the Inspection in the schools are given in the accompanying table, as is also the number examined, and the action taken.

Column ^{seven} ~~four~~ contains those cases so slightly affected and already obtaining adequate care as to require no further attendance on the part of the Authority. It will be noticed in column ^{ten} ~~8~~ and 9 that not all those upon whom Statutory Notice to cleanse was served, required cleansing by the Authority. Parents differ in the degree of pressure necessary to compel them to ~~cease~~ to be a danger to the public.

(b) Minor Ailments.

This group of diseases includes Impetigo, Otorrhoea, Blepharitis, Eczema, Abscesses, Ringworm, Minor In-

GENERAL CLEANLINESS EXAMINATIONS.

School.	Dept.	1 No. Exam.	2 Clean.	3 Somewhat Verminous.	4 Highly Verminous.	5 No. of re-examinations.	6 No. Clean.	7 No. Improved.	8 Statutory Notice to Cleanse.	9 Cleansed by Education Authority
1	B. G. Inf.	482 469 362	479 304 306	— 158 46	3 7 10	2 140 28	1 18 9	1 44 5	— 9 —	— 5 —
2	B. G. Inf.	482 449 246	481 278 219	1 164 27	— 7 —	1 80 7	— 12 3	1 58 2	— 3 —	— 5 1
3	B. G. Inf.	413 384 217	413 244 193	— 138 22	— 2 2	— 62 7	— 8 —	— 43 7	— 1 —	— — —
4	B. G. Inf.	130 145 59	124 74 51	— 59 8	6 12 —	15 81 —	4 7 —	1 26 —	2 8 —	— — —
5	B. G. Inf.	546 576 266	543 393 256	1 180 10	2 3 —	2 90 3	1 3 1	1 77 2	1 1 —	— — —
6	Inf.	142	136	6	—	6	1	2	—	—
7	Inf.	911	828	81	2	75	6	20	—	1
8	B. G. Inf.	731 742 806	729 602 760	2 135 46	— 5 —	3 247 62	2 36 2	— 59 23	— 10 2	— 15 1
9	B. G. Inf.	291 222 201	291 188 194	— 34 7	— — —	2 55 23	1 4 2	1 21 10	— — —	— — —
10	B. G. Inf.	136 138 98	136 122 90	— 16 8	— — —	3 7 9	2 2 1	1 4 4	— — —	— — —
11	B. G. Inf.	72 74 62	72 68 46	— 6 14	— — 2	6 23 40	3 1 1	1 2 8	— — —	— — —
12	B. G.	60 65	58 59	2 5	— 1	2 3	1 2	1 5	1 1	— —
Totals ..		9977	8737	1176	64	1084	144	430	38	29

juries, Enlarged Glands, and minor degrees of more serious maladies, *e.g.*, Anæmia, Malnutrition, etc. These, together with a large number of miscellaneous cases are treated at the School Clinics by the School Nurses under the supervision of the School Medical Officer.

Some cases are brought by the parents voluntarily for examination and medical advice. The majority, however, are referred for treatment by school teachers, attendance officers or others, and a considerable number are referred by the School Medical Officer at his visits and inspections in the schools.

Table IV. will be found to contain particulars of these cases, and the treatment given.

(c) Tonsils and Adenoids.

One hundred and thirty-three cases of enlarged tonsils and adenoids were found at the Routine Examinations. 76 of these were subsequently referred for treatment, it being the rule to observe all cases for a period before advising treatment, unless urgent from gravity of symptoms. In addition, 56 special cases were referred for treatment, and 81 shewing enlargement, etc., were kept under further observation, and suitable advice given. The numbers shew a considerable reduction on 1920. As handkerchief drill and breathing exercises become general, the numbers will still further diminish.

The measures taken to remedy these defects depend upon several factors, the most important of which are the degree and permanency of the enlargement and the disability resultant therefrom.

All cases are kept under observation after discovery, and measures such as breathing exercises, handkerchief drill, nasal toilet, etc., adopted in the endeavour to re-establish the functions of the nose, throat, and ears. After a sufficient time when it is apparent that only operation can effect a remedy, the parent or guardian is advised to consult his own doctor for treatment. When this fails, or when the parent cannot afford private treatment, the patient is put on the waiting list of the Pendlebury Children's Hospital, after a visit to the Outpatients' Department at Gartside Street, for consultation with a Specialist,

The latter submits lists to the School Medical Officer

giving (1) cases who attended for inspection, (2) date for operation upon selected cases, (3) names of cases operated upon, (4) names of cases finally treated and discharged.

Cases are notified before operation, and advised as to previous care necessary. They are visited again upon discharge from hospital by the School Nurses, and finally are re-inspected at intervals by the School Medical Officer, to ensure that the mouth breathing habit has been corrected.

When necessary, cases are kept in hospital overnight after operation.

The arrangements work smoothly and are satisfactory.

See Table IV. for the number operated upon during the year.

(d) **Tuberculosis.**

The pre-tubercular child may attend the Open Air School. Means are taken to secure treatment where necessary at the School Clinic, or by family practitioner.

By mutual co-operation and understanding with the Tuberculosis Officer, all suspected or actual cases of Tuberculosis discovered in the schools, are referred to him for diagnosis or an opinion. Treatment follows where necessary as a natural course, or the case may be referred to the family doctor. I have to thank the Tuberculosis Officer for his readiness to co-operate, and his help when sought.

A report by Dr. Jessel, the Tuberculosis Officer, will be found in the Report of the Medical Officer of Health.

(e) **Skin Disease.**

These help to swell the Minor Ailments, the remarks under which will apply.

Twenty-six cases of Scalp Ringworm were found. The majority are referred to, and many accept X-ray treatment at the City Hospitals, and are quickly cured. Some attend the School Clinics and others seek treatment elsewhere. The comparative freedom of the schools from Ringworm is noteworthy.

One hundred and forty-two cases of Impetigo of the

Skin were found. This is the most common disease in the schools.

Minor skin diseases are treated at the School Clinics, or are referred to private doctors.

(f) External Eye Disease.

Sixty-one cases of Conjunctivitis were found, which together with Squint (56 cases) comprise the majority of such diseases. There were 28 cases of Blepharitis, and a small number of other conditions, *e.g.*, Ulcers, etc.

(g) Vision.

One hundred and seventy cases of Defective Vision were found. Great care is taken over this disorder. The number shews an increase ^{from} ~~in~~ 1920 of 57.

Dr Stirling, the consultant appointed by the Authority, attends the school clinic once a fortnight, and examines all cases of defective vision, prescribing suitable glasses. He is accompanied by a skilled optician. Cases supplied with glasses are re-inspected at intervals by the former, and precautions taken to ensure that the children wear the glasses provided.

This is, in my opinion, the most important of the provisions for the welfare of children made by the Authority. Undetected and untreated defects of vision in childhood predispose to blindness later, and severely handicap the health, happiness, and earning capacity of the victims. Treatment, provided by the Authority is within the reach of all children of school age. The interest exhibited and the work performed by Dr. Stirling at the school clinic, are deserving of the highest praise. His report (given below) should be studied by all who have to deal with children.

SCHOOL OCULIST REPORT FOR YEAR 1921.

During the year 1921, 248 children were examined and treated. Of this total 162 were new cases, and 86 were old cases completely re-examined again. In all, these 248 children made 411 attendances before me.

The following diseases of the Eyes were noted. The figures after each disease denote the number of times that particular disease was diagnosed.

ERRORS OF REFRACTION.

Emmetropia	42
Hypermetropia	81
Myopia (under 6d sp)	15
High Myopia (over 6d sp)	3
Hypermetropic Astigmatism	14
Myopic Astigmatism	5
Compound Hypermetropic Astigmatism	24
Compound Myopic Astigmatism	19
Mixed Astigmatism	21

DISEASES OF THE LIDS.

Blepharitis	18
Epicanthus	1
Supra-Orbital Abscess	1
Ptosis	3
Foreign Body under Lid	1

DISEASES OF LACHRYMAL APPARATUS.

Lachrymal Obstruction	1
-------------------------------	---

DISEASES OF OSCULAR MUSCLES.

Convergent Strabismus	56
Alternating Convergent Strabismus	4
Divergent Strabismus	2
Amblyopia sequela of Convergent Strabismus .	7
Paralysis of Superior Oblique Muscle	1
Paralysis of third Cranial Nerve	1
Nystagmus	2

DISEASES OF CONJUNCTIVA.

Simple Septic Conjunctivitis	11
Phlyctenular Conjunctivitis	3

DISEASES OF CORNEA.

Nebulæ of Cornea	8
Phlyctenular Keratitis	9
Interstitial Keratitis	2
Adherent Leucoma	2
Ulcer of Cornea	2

MISCELLANEOUS DISEASES.

Choroiditis	1
Anophthalmos	4
Glass Eye ordered	3

CONGENITAL ABNORMALITIES.

Congenital Lental Opacities	1
Persistent Pupillary Membrane	1
Albino cum second Nystagmus	1

Coloboma Iris Choroid and Optic Nerve ... 1

The following cases were referred to the Manchester Royal Eye Hospital for treatment under my care.

Two Cases of Interstitial Keratitis.

One Case of ~~Nebula~~^{ulcer} of the Cornea.

One Case for operation for Convergent Strabismus.

One Case of Severe Conjunctivitis.

The following cases were recommended for ~~the~~^a Special School for ~~special~~ tuition, owing to their severe loss of vision

(1) A case of Congenital Lens opacity with secondary Nystagmus.

(2) A case of Congenital Coloboma~~a~~ of Iris Choroid and Optic Nerve, both eyes.

In all cases the shape of the lenses prescribed in the glasses were oval, when the lens ordered was purely spherical in type. In all Cylindrical Astigmatic Lenses, the lenses were round in shape, so that very accurate adjustment could be obtained, thus obviating provision of new lenses if any error occurred.

The prevalence of Convergent Strabismus shows how necessary it is for all school nurses and teachers to refer cases for examination if there is a suspicion of a "squint" seen, so as to prevent the progressive blindness which results so quickly after the squint starts. It is also important that if a school nurse or teacher has any doubt about the vision of one of the children, this child should be referred for examination as soon as possible. Complaints of not being able to see the figures on the blackboard indicate the possibility of Myopia and complaints of blurring of the letters when reading, indicate Hypermetropia, and in children under 10 years of age the ordinary test of reading graduated letters on the usual Standard Types is of little use as a test for vision, the only method of accuracy being a Retinoscopy Examination under a Mydriatic.

During this year I have adopted the following measure to try and stop the progress of Myopia in school children.

(1) Glasses are prescribed to be worn always.

(2) These glasses are adjusted and re-tested and modified if necessary, every six months.

(3) All exercises which involve physical effort with the eyes in a pendant position are stopped, especially such as Physical Drill and Gymnastic lessons.

- (4) Instructions are given to teachers to see these pupils read with their books held at the level of their eyes, and not looking down on their books, and that all writing is done in a good light and in a position square with their desks, and in a free, uncramped position.

In conclusion, it cannot be too deeply impressed on the teachers that they should watch for signs of Defective Vision or Inflammation of the Eyes, and have the case referred to the Eye Clinic with as little delay as possible.

In bad vision cases in children, there is no method of telling the disability accurately, except by a Retinoscopy under a Mydriatic, and this can be done only by someone who has had a long expert training, and it is better to refer many normal cases rather than miss one abnormal case.

An early referring of a case of inflammation to the Eye Clinic means early and efficient treatment with the result the child is back at school sooner, and the resultant permanent damage to the eye is much less.

(Signed) WM. STIRLING, O.B.E., M.D.

(h) **Ear Disease and Hearing.**

This is the most unsatisfactory part of the work undertaken by the Authority. Cases attend daily for treatment at the School Clinic. The results are disappointing. Acute Otorrhœa, Defective hearing due to wax, and Eustachian Obstruction, rapidly improve under treatment. Chronic cases drag on with no apparent change of condition. Arrangements might be made for operative treatment of such cases in hospital.

Twenty-five cases of Defective Hearing were found (apart from Otitis Media), chiefly due to wax, Eustachian Obstruction and Old Standing Disease. There were 83 cases of Running Ears (Otitis Media). This is a reflection upon the present methods for cure and prevention of the disease. Acute cases can be cured quickly, chronic cases require Hospital treatment, perhaps operation. Most can be prevented by suitable care after Infectious Disease, and the avoidance of mouth breathing. Mouth breathing

can be prevented, and with it most running ears and noses, enlarged tonsils, etc., but parents must co-operate with teachers, and both must co-operate with the doctors. It is pathetic to see the number of mouth breathers of school leaving age, in the community.

(i) Dental Defects.

Completely sound teeth are the exception. The need for efficient dental inspection and treatment is urgent. The majority of those to whom advice is given, neglect it, and preservation of the teeth is left to chance.

A scheme modest in its inception, but extending ultimately to complete treatment, preventive and curative, was submitted to the Board by authority of the Committee. Sanction was not given for reasons of economy. The Board will, however, re-consider the scheme at a more suitable time.

Crippling Defects, etc,

Cases too severe for treatment locally, or for which other provision is desirable, are referred to the Hospital in the City.

Infectious Disease in Schools.

Energetic action has been taken during the year to detect and prevent the spread of Infectious Disease in the schools, and teachers are encouraged to send children to the School Clinic for diagnosis, should any suspicion of Infection arise.

Action taken under Art. 53 (b) of the code.

Upon receipt of a notification of Infectious Disease by the Health Department, a notice is sent to teachers and to the School Attendance Officer, excluding all school children from the affected household. These children and the patient are re-admitted on a certificate of the School Medical Officer, who examines the children after an appropriate interval depending upon the nature of the disease, and in accordance with the rules for exclusion, drawn up by the Board of Education.

A careful examination is made of contacts in the schools, and a very large number of such have been examined during the course of the year, in the hope of discovering missed cases.

In the case of Diphtheria, all contacts are swabbed, and any other children in the affected school presenting doubtful symptoms or signs of the disease, *e.g.*, pallor, enlarged glands, running noses, etc.

Four cases of active nasal Diphtheria were discovered thus, during the last three months.

The Public Health Department is intimately associated in the prevention of Infectious Diseases in the Schools. No child or contact of a patient suffering from Diphtheria is admitted to school until a negative Bacteriological examination is made.

I am convinced that Diphtheria spreads in schools much more by undetected nasal cases than any other way. All children found by teachers, parents, etc., with chronic running noses and looking pale and debilitated, should be sent at once to the School Medical Officer for examination. Not infrequently during the past four months have I found such cases due to Diphtheria, either active or passive. Such children are actual or potential agencies in the spread of the disease.

The comparative mildness of Scarlet Fever during the year increased the risk of spread in the schools. There is no indication, however, that the schools were the means of spread of the disease which did not become epidemic.

Art. 53 (b) was also made use of occasionally for excluding unclean and verminous children, and those whose physical condition rendered them incapable of receiving proper benefit from instruction.

No action was taken under Art. 57.

Action taken under Art. 45 (b) during the year.

In December, Catarrh of Influenza type became epidemic in the district. The incidence was chiefly in the Pendlebury area, and owing to the rapid spread of the disease in certain schools, it became necessary to advise closure as follows :—

St. Mary's Mixed School, St. Mary's Infant School.
December 12th, 1921 ; St. Joseph's Mixed and
Infant Department, 14th December, 1921.

St. Augustine's Infant School, 19th December, 1921.

These schools remained closed until the school holidays began on 22/12/21. After the holidays the incidence of Influenza amongst school children had abated, and all the schools re-opened as usual with the average attendance.

The measures taken to prevent and check the spread of the disease amongst school children ~~from~~ ^{from} an integral part of the work done to check the disease generally, and ~~are~~ ^{is} fully dealt with in my report as Medical Officer of Health. In these measures the School Medical Service was in full co-operation with the Public Health Department.

The question arises, what part did the schools play in the origin and spread of the disease? I am inclined to attach much importance to the influence of the schools as a factor in the epidemic spread, if not in the origin of the disease.

Defective heating, lighting, and ventilation are the most important agents in the spread of the disease; reduced vitality from inclement weather, defective home conditions with lack of food and clothing from industrial unrest in the district. These, and the presence of an infective agent—combined to give origin to the epidemic.

I should like to stress the importance of handkerchief drill in the prevention of the disease. Most of the children had running noses teeming with the organism of the disease as ascertained by bacteriological examination, and few of the infant children had handkerchiefs or knew how to use them.

Paper sanitary handkerchiefs were supplied in one instance from the Public Health Department, and organised drill commenced in which the teachers rendered valuable assistance.

It would be a good thing if handkerchief drill and breathing exercises formed part of the curriculum of every school, and paper handkerchiefs could be supplied to such children as could not or did not bring their own handkerchiefs. Children must be taught to breathe, just as they must be taught to eat, and no child can breathe through a nose blocked by swelling or secretion. Lessons in proper breathing and in nasal toilet should begin in infancy, and be continued through childhood. It is our duty by what-

children in the schools for infectious disease, the swabbing of contacts of Diphtheria, etc. In addition to this, part of their time is taken up with the compilation of statistics and the keeping of records. The school nurses attend at the Medical Inspection of the children. Their services are also utilised in maintaining that co-operation which is so necessary between the School Medical Service and other agencies, *e.g.*, N.S.P.C.C, School Attendance, etc.

Open Air Education.

It is fortunate that Open Air Education can be so conveniently provided, and it is pleasing to note the number of schools which avail themselves in suitable weather of playground classes. I have noted the improved appearance and relative freedom from defect exhibited by these schools which make most use of facilities for Open Air education and recreation. The practice should be encouraged in all schools. I have no doubt that it is due partly to open air education that the schools are so comparatively free from disease.

There are some schools where playground education classes are impossible, owing to proximity to thoroughfares, etc., and it is a pity that more schools are not provided with covered sheds for use in wet weather. School journeys are an appropriate and possible form of education in this neighbourhood, which could be made more use of. A playing field is a valuable asset to any school, and several of our schools so provided, reflect the advantage in the condition of the children. School camps are valuable means for open air education, so far not made use of.

The Authority is to be congratulated upon its resolve in the face of considerable adverse criticism to increase the accommodation and improve the equipment of the Open Air School.

This school is a most valuable investment to the district, and is essentially an economical project, providing as it does, education and health, alleviating suffering, curing disease, and prolonging life. The results cannot be measured. There are children in attendance unfit for another school. Such children are being rendered more fit to fight their way both physically and intellectually when they leave school, and happiness is coming to them

ever methods possible to prevent children becoming habitual mouth breathers. Such a habit is the actual cause of many diseases, and a predisposing cause of many more.

Following Up.

This term embraces the procedure from ascertainment of a defect in a child until the case has been discharged cured, or treatment and observation are no longer necessary. Bearing in mind the fact that the School Medical Service is in essence a preventive service, it is obvious that "following up" is one of its most necessary functions. It may be that defects are due to home conditions, to faulty houses, faulty diet, faulty clothing, neglect or apathy of guardians and parents, ignorance and so forth, and it is accepted as a duty that each defect be traced to its origin, and where possible the cause removed; in addition to the remedy of the defect itself.

With this object in view, when a defect is discovered the parents or guardians are notified, and where it is thought advisable or necessary, the home visited. All cases are re-inspected at intervals in the schools, and occasionally at the clinics. Where treatment is necessary, the case is in the first instance referred to the family doctor, and all cases are kept under observation. The procedure for treatment varies somewhat according to the defect and the family circumstances. Owing to ^{the} many excellent hospitals available it is seldom that expert advice and treatment cannot be obtained.

The procedure for remedying uncleanliness is dealt with elsewhere. The work undertaken by the School Nurses includes attendance at the School Clinics daily, and the treatment of cases under Medical advice, attendance at the Ophthalmic Clinic, together with the duty of seeing that parents attend when required; the visiting and following up of all cases of defect in the houses, and the visiting of all cases of Tonsils and Adenoids operated upon under the Authority's scheme.

Cases of Pneumonia and Measles in school children are also visited, in all of which services, much time is taken ^{up} and valuable information imparted.

Inspection of children in the schools for uncleanliness also forms part of their duty, and the examination of

at the same time. They are constantly under the care of your Medical Officer and Nurses.

Children convalescing from acute diseases, debilitated children, children suffering from anæmia and such defects, gain in health and accomplishment by a temporary period of attendance at the Open Air School.

Not all parents are willing to allow their children to attend. This, I think, is due to the fact that the idea is prevalent that the school exists for consumption. Such an idea should be rigorously combatted. At no time is a child allowed to attend who is suffering from any disease of a communicable nature, in any active form.

As it functions at present the school allows of much improvement. Cocoa and biscuits are provided, but a mid-day meal followed by a period of rest is most desirable.

The provision of baths, cloakroom accommodation, artificial lighting, and certain structural alterations would amply repay in kind the expenditure involved. A complete scheme awaits sanction of the Board, and includes the utilization of the other hut.

On the register of the Open Air School at the end of the year there were 33 boys and 39 girls. These children are medically inspected every three months or more frequently if required, and when fit are recommended to return to the ordinary Elementary School. New cases are admitted on the recommendation of the Medical Officer, who has a knowledge of the children in the schools who would benefit by a period at the Open Air School. It is the rule to find that parents whose children have attended for a time are so pleased with the results, that they are unwilling to have the children transferred to their usual school. The staff at the school is to be commended for the health policy so ably carried on under great difficulties.

The complaints from which the children in attendance suffer are as follows :—

	Boys.	Girls.
Chest Affections—Non-Tubercular	11	17
Anæmia	6	6
Debility	12	8
Heart	3	3
Chorea	1	4
Scoliosis	—	1

At the examination held at the end of the year, 34 of these children shewed marked improvement in health since the previous examination.

Physical Training in the Schools.

The advice of the School Medical Officer is available to all teachers who care to avail themselves of it. At times it becomes necessary to suggest suitable remedial exercises for postural and other deformities, and such are practised when time permits.

Greater attention should, I think, be given to breathing exercises. When it is remembered that 80 per cent. of mouth-breathing in children is due to habit or conditions removable by suitable breathing exercises, and what an amount of disease is directly or indirectly due to this habit, it will be understood how important it is to prevent and remedy mouth-breathing in children. If parents would co-operate with teachers, and if teachers would insist on nose breathing in the schools, much disease of childhood and late life would be prevented. This applies more particularly to Infant Schools.

A system of breathing exercises and handkerchief drill has been distributed to teachers and to parents of affected children.

Provision of Meals.

Breakfast and dinners are provided to necessitous children at three centres. The centres and the children are under the observation of the School Medical Officer. The meals provided are satisfactory, and are supplied to children recommended by the School Medical Officer, and to those whose parents' income falls below a certain scale given elsewhere. Arrangements are in the hands of the School Attendance Officers and the School Medical Officer.

The following represents the work done during the year at the school canteens. :—

(1) Number of breakfasts supplied Jan. 1-Dec.	
31	80,470
(2) Number of dinners supplied Jan. 1-Dec 31 ..	92,998
(3) Number of breakfasts supplied during the	
the period of the colliers' strike	65,804
(4) Number of dinners supplied during the period	
of the colliers' strike	77,917

School Baths.

Baths are not provided in any of the schools. At present the children in limited numbers make use of the Public Baths at stated times, which, although useful as a means of physical development, cannot be expected to maintain a desirable standard of personal cleanliness amongst the children generally. School baths are included in the provision contemplated for the Open Air School.

Co-operation of Parents.

Parents are notified by the teachers beforehand of the date and time of the examination of their children. They are invited to attend and consult the School Medical Officer.

The attendance at Routine Examination is small, except when infants are concerned, as parents have got to know that in the event of a defect being found, they will be visited or notified by the Staff. Attendance at special examinations, for defects noted previously is the rule, and as a whole parents co-operate willingly, although not always with enthusiasm. When difficulties arise in securing co-operation of parents, it is usually because certain defects seem to them too trivial for interference. The public, however, is becoming acquainted with the need for ascertaining and remedying defects at the earliest possible stage.

Personal interviews with parents have proved the most successful means of obtaining their co-operation. These are supplemented in many instances by letters of instruction.

Sometimes it is found that a Specialist's opinion is more readily followed, and where possible and advisable, this is secured for parents, either locally or in Manchester.

The teachers assist willingly and obligingly. So much lies in their power. Their influence with parents is marked, and freely used in securing the co-operation of parents.

Head teachers usually attend the Medical Inspection, and are acquainted with the defects found. Record cards are prepared by them, and the children are supervised for defects and for Infectious Diseases, weekly returns of which are sent to the School Medical Officer. In these and many

other ways, the help of the teachers is invaluable and highly appreciated.

Co-operation of Attendance Officers in the work is cordial and complete. They supervise school absentees and obtain their attendance at the school clinic when necessary. They keep the School Medical department in touch with children unfit for school, cripples, blind, deaf, dumb, etc.—investigate the circumstances of children on the feeding lists, and the home conditions of children referred to them by the Medical Officer. They are an important link between the ailing or defective child and the School Medical department, and in many instances prove valuable sources of information regarding the treatment of such children.

The services of the N.S.P.C.C. are of value, and utilised in certain cases for securing treatment of children whose parents or guardians cannot be persuaded by other methods to take a reasonable interest in the health and welfare of their children.

Blind, Deaf, Defective, and Epileptic Children.

A census of the children has been made from information gained from Medical Inspection and from outside sources School Attendance Officers, Infant Clinics, etc. Particulars will be found in Table 2,3 which also shews the action which has been taken.

Employment of Children and Young Persons.

The bye-laws governing the employment of children out of school hours have not yet come into force. Children are chiefly employed in the cotton and mining industries, a small number obtaining employment in miscellaneous industries in the district.

At the time of writing, considerable unemployment exists, and children leaving school find increasing difficulty in getting work. As the School Medical Officer is also Certifying Factory Surgeon, and a member of the Juvenile Employment Committee, he forms ^{with} a connecting link between all the agencies concerned in the welfare of the child.

The fitness of the leavers for work as found at the Inspections during 1921, is as follows :—

Category A—	Boys.	Girls.
Fit for any work appropriate to age	220—81.1%	219—80.5%
Category B—		
The healthy child capable of work according to its measure of strength, therefore needing selection of work	28—10.3%	27— 9.9%

Category C—		
The child with some physical or mental defect, which debars it from certain employments ..	23— 8.4%	26— 9.5%

The figures are an index of the success of the Authority's scheme for the detection and cure of disease in chi'dren. All Category C children are secured such treatment and given such advice as will tend to fit them for a higher grade of employment.

In this connection it is instructive to compare the numbers rejected by the Factory Surgeon for employment in factories.

Table shewing the number of children rejected by the Certifying Factory Surgeon during October, November, and December, 1921.

(a) Infantile Paralysis	1
(b) Pediculosis	4
(c) Tuberculosis Lungs	2
(d) Organic Heart Disease	1
(e) Defective Vision, uncorrected	1
(f) Under age	6
Total number rejected	15—5.5%
Total number examined	271—

In addition to these, 12 were notified with certain reservation as to employment and treatment, *e.g.*: 3 for Defective Vision; 8 Anæmia; 1 Tuberculosis Lung.

The Factory Surgeon consults with the Juvenile Employment Committee regarding such children as are rejected with the object of obtaining suitable employment. Cases rejected are commonly found to have contracted illness or other disability, *e.g.*, Pediculosis, subsequent to leaving school.

Examination of Scholarship Candidates.

Candidates from the Elementary Schools are examined specially by the School Medical Officer either in the school or at the school clinics. A report is made on each candidate examined.

Summer Time Act.

The consensus of opinion is that there is no substantial evidence in support of the contention that the Act must be held responsible for any reduction in the hours of sleep of children. Where such has occurred, there has generally been a lack of parental responsibility and control.

The Authority might with advantage, issue warnings to parents emphasising the importance of sleep to children. Teachers might be asked to notify the S.M.O. of cases presenting signs of frequent tiredness and sleepiness at the morning school sessions.

TABLE I.
ROUTINE MEDICAL INSPECTIONS.

Age.	ENTRANTS.			
	3	4	5	Total.
Boys	40	48	78	166
Girls	46	61	95	202
Totals	86	109	173	368

Age.	Leavers.				Intermediate Group. 8	Grand Total.
	12	13	14	Total.		
Boys	246	26	—	272	218	656
Girls	232	43	—	275	191	668
Totals	478	69	—	547	409	1324

	Special Inspect- ions. Special Cases.	Children Re-examined.	No. of Inspections
Boys	475	416	1429
Girls	506	418	1421
Totals	981	834	2850

No. of Individual Children Inspected, 2102.

TABLE II.

RETURN OF DEFECTS FOUND IN THE COURSE
OF MEDICAL INSPECTION.

DEFECT OR DISEASE.		Routine Inspections.		Specials.	
		Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.
SKIN	Malnutrition	5	14	2	23
	Uncleanliness	13	3	320	452
	Head	—	—	—	—
	Body	—	—	—	—
	Ringworm—				
	(Head)	1	—	25	—
	(Body)	—	—	14	—
	Scabies	2	1	—	2
	Impetigo	6	1	135	—
	Other Diseases	10	6	99	2
EYES	Blepharitis	9	1	18	—
	Conjunctivitis	9	—	52	—
	Keratitis	2	—	10	—
	Corneal Ulcer	—	—	—	—
	Corneal Opacities	—	—	—	—
	Defective Vision	64	7	77	28
EAR	Squint	7	1	35	13
	Other Conditions	4	1	10	4
	Defective Hearing	16	2	7	—
	Otitis Media	17	2	64	—
	Other Ear Disease	—	—	—	1
	Enlarged Tonsils (I)	58	45	22	14
THROAT & NOSE	Adenoids (II)	6	4	32	4
	(I) & (II)	11	3	8	1
	Other Conditions	7	10	4	10
	Enlarged Cervical Glands (Non-Tubercular)	—	7	5	11
TEETH—	Defective Speech	—	2	—	—
	Dental Diseases, &c.	6	—	1	—
	Heart Disease—				
HEART AND CIRCULATION	Organic	—	11	—	7
	Functional	—	9	—	—
	Anæmia	14	17	4	15
LUNGS	Bronchitis	7	10	4	13
	Other Non-Tubercular Diseases	—	7	1	7
	Definite Pulmonary	—	13	—	14
TUBERCULOSIS	Suspected	—	6	—	5
	Non-Pulm'ry Glands	—	1	1	—
	Spine	—	—	—	—
	Hip	—	—	—	—
	Other Bones & Joints	—	—	—	—
	Skin	—	—	—	—
NERVOUS SYSTEM	Other Forms	—	1	—	—
	Epilepsy	—	—	—	4
	Chorea	—	—	3	10
	Other Conditions	—	—	—	—
DEFORMITIES	Rickets	4	4	2	1
	Spinal Curvature	1	—	—	1
	Other Forms	3	8	—	5
	Other Defects or Diseases	7	11	39	138

Number of individual children having defects which require treatment
or to be kept under observation 946.

TABLE III.
Numerical Return of all exceptional Children in the area 1920.

			Boys	Girls	Total
Blind (including partially blind, within the meaning of the Elementary Education Act, 1893)	Attending Public Elementary Schools		2	5	7
	Attending Certified Schools for the Blind		—	—	—
	Not at School		—	—	—
Deaf and Dumb (including partially deaf, within the meaning of the Elementary Education Act, 1893)	Attending Public Elementary Schools		1	1	2
	Attending Certified Schools for the Deaf		—	1	1
	Not at School		—	—	—
Mentally Deficient	Feeble-Minded	Attending Public Elementary Schools	2	3	5
		Attending Certified Schools for Mentally Defective Children	—	—	—
		Notified to the Local (Control) Authority by the L.E.A. during the year	1	—	1
		Not at School	6	2	8
	Imbeciles	At School	—	—	—
		Not at School	2	1	3
	Idiots		—	—	—
Epileptics	Attending Public Elementary Sch.		7	1	8
	Attending Certified Schools for Epileptics		—	—	—
	In Institutions other than Certified Schools		—	—	—
	Not at School		1	1	2
Pulmonary Tuberculosis	Attending Public Elementary Schools		4	14	18
	Attending Certified Schools for Physically Defective Children		—	—	—
	In Institutions other than Certified Schools		—	—	—
	Not at School		—	—	—
Crippling due to Tuberculosis	Attending Public Elementary Schools		—	1	1
	Attending Certified Schools for Physically Defective Children		—	—	—
	In Institutions other than Certified Schools		—	—	—
	Not at School		1	1	2
Crippling due to causes other than Tuberculosis	Attending Public Elementary Schools		9	13	22
	Attending Certified Schools for Physically Defective Children		—	—	—
	In Institutions other than Cer. Sch.		—	—	—
	Not at School		2	—	2
Other Physically Defectives (e.g., Delicate and other Children suitable for admission to Open Air Schools. Children suffering from Heart Disease)	Attending Public Elementary Schools		3	8	11
	Attending Open Air School		24	24	48
	Attending Certified Schools for Physically Defective Children		—	—	—
	Not at School		2	—	2
Dull or Backward	Retarded 2 years		22	16	38
	Retarded 3 years		5	4	9

TABLE IV.

TREATMENT OF DEFECTS OF CHILDREN DURING 1921.

A.—TREATMENT OF MINOR AILMENTS.

Disease or Defect.	Referred for Treatment.	No. Children Treated.		Total.
		Under L.A. Scheme.	Otherwise.	
SKIN {	Ringworm (Head).....	26	15	25
	" (Body).....	14	12	14
	Scabies	33	24	31
	Impetigo.....	141	130	141
	Minor Injuries			
	Other Skin Diseases	109	85	103
	Ear Disease	104	90	97
	Eye Disease	114	88	102
	(external or other)			
	Miscellaneous	54	19	34

B.—No. OF CHILDREN SUBMITTED TO REFRACTION.

Referred for Refraction.	No. submitted to Refraction.				For whom glasses were prescribed.	For whom glasses were provided.	Recomm'd'd for treatment other than by glasses.	Received other forms of treatment.	For whom no treatment was considered necessary
	Under L.E.A. Scheme (Clin. or Hospital).	By private Practitioner or Hospital.	Otherwise.	Total.					
226	219	5	—	224	101	101	19	10	104

C.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for Treatment.	No. of Children received Operative Treatment.			No. who received other forms of Treatment.
	Under L.E.A. scheme (Clinic or Hospital).	By Private Practitioner or Hospital.	Total.	
133	64	2	66	20

TABLE V.

SUMMARY OF TREATMENT OF DEFECTS AS SHOWN IN TABLE IV.

A.B.C.D.E.

Disease or Defects.	No. referred for Treatment.	No. of Children Treated.		
		Under L.A. scheme.	Otherwise.	Total.
Minor Ailments	595	463	83	547
Visual Defects	226	219	5	224
Defects of Nose & Throat	133	64	2	66
Dental Defects	—	—	—	—
Other Defects	—	—	—	—
Total	954	746	91	837

TABLE VI.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED
AT THE ROUTINE INSPECTIONS DURING THE YEAR 1921.

1. The total number of children medically inspected at the Routine Inspections	1324
2. The number of children in (1) suffering from defects (other than uncleanness or defective clothing), who require to be kept under observation but not referred for Treatment	205
3. The number of children in (1) suffering from :—	
Skin Disease	27
Defective Vision, including Squint	73
Eye Disease	26
Defective Hearing	18
Ear Disease	19
Nose and Throat Disease	150
Enlarged Cervical Glands (Non-Tubercular)	7
Defective Speech	2
Dental Disease	6
Heart Disease —Organic	11
" " Functional	9
" " Anæmia	31
Lung Disease (Non-Tubercular)	24
Tuberculosis :—	
Pulmonary Definite	13
" Suspected	6
Non-Pulmonary Tuberculosis	2
Diseases of the Nervous System	—
Deformities	20
Other Defects or Diseases	37
4. The number of children in (1) who were referred for Treatment (excluding uncleanness, defective clothing, etc.)	276
5. The number of children who received treatment for one or more defects (excluding uncleanness, defective clothing, etc.)	156