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LANCASHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

TWENTY-THIRD

ANNUAL REPORT

OF THE

County Medical Officer of Health

AND

School Medical Officer

FOR THE

YEAR ENDED 31st DECEMBER, 1931.

PRESTON:

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LANCASHIRE COUNTY

ANNUAL REPORT

COUNTY MEDICAL OFFICE

1895-1896

BY J. H. B. B. B.

CONTENTS.

	PAGE.
Accidents to School Children	51
Administration	7
After-Care Centres	52-53
Ante-Natal Care	10-11
Artificial Light Treatment	44-51
Biddulph Orthopaedic Hospital	54-55
Blind Children	68-69
Blind, Education of	70-71
Child Welfare Centres	8-10
Co-ordination with other Health Services	7-13
Crippling Defects	33-34, 51-55
Dancing	58
Deaf Children	69
Deaf, Training of... ..	72
Debilitated Children under School Age	13
Dental Defects	33, 44, 98
Elementary Schools, Medical Inspection of	16-34
Enuresis—Special Inquiry (Dr. R. J. Batty)	85-88
Epileptic Children	70
Exceptional Children in Area	94-96
Exclusions from School	35
Following Up	35
Hospital Treatment	42-44
Infant Mortality	12
Infectious Disease	34-35
Meals in Schools, Heating and Service of	16
Medical Inspection of Elementary Schools	16-34
Medical Inspection of Secondary, &c., Schools	72-77
Medical Treatment, Elementary Schools	35-51, 56-57
Medical Treatment, Secondary, &c., Schools	77-83
Mentally Defective Children	70
Midwifery Service	12
Minor Ailments	43
Nose and Throat Defects, Treatment of	42-43, 97
Open Air Education	58
Ophthalmia Neonatorum	11-12
Optic Atrophy, Hereditary—Special Investigation (Dr. W. C. V. Brothwood)	89-91
Organised Games... ..	58-60
Orthopaedics	51-55
Parents, Co-operation of	68
Physical Training	58-64
Provision of Meals and Milk for School Children	65-67
School Attendance Officers, Co-operation of... ..	68
School Camps	64, 84
School Clinics	36-41
School Closures	34-35
School Hygiene	13-16
Secondary, &c., Schools, Medical Inspection of	72-77
Swimming	60-64
Teachers, Co-operation of	68
Tonsils and Adenoids, Enlarged—Operative Treatment of	43
Vision, Defective, Treatment of	43-44, 97
Visual Acuity, Elementary Schools	33
Visual Acuity, Secondary, &c., Schools	75, 77
Voluntary Bodies, Co-operation of	68

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MRS. HORSFALL
MRS. A. A. KEECH

Director of Education :

P. E. MEADON, C.B.E., M.A.

MEDICAL STAFF.

(Jointly with the Public Health Department).

County Medical Officer of Health and School Medical Officer :

J. J. BUTTERWORTH, M.D., Ch.B., D.P.H.

Chief Assistant County Medical Officers :

R. H. W. FISHER, M.A., M.R.C.S., L.R.C.P., D.P.H. (Resigned 31st July, 1931).
F. HALL, M.D., Ch.B., D.P.H. Barrister-at-Law (Appointed 18th April, 1932).
E. H. SCHOLEFIELD, M.A., M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.

Assistant County Medical Officers :

G. V. ASHCROFT, M.D., Ch.B., M.R.C.P., D.P.H. (Appointed 1st June, 1932).
L. E. H. R. BARKER, B.A., M.B., Ch.B., D.P.H.
R. J. BATTY, B.Sc., M.D., Ch.B., D.P.H.
W. C. V. BROTHWOOD, M.D., Ch.B., M.M., D.P.H.
CATHERINE L. CORBETT, M.B., Ch.B., D.P.H.
A. C. CRAWFORD, M.B., Ch.B., D.P.H., D.T.M.
R. W. ELDRIDGE, B.Sc., M.D., Ch.B., M.R.C.S., L.R.C.P., D.P.H.
(Appointed 1st July, 1932).
S. C. GAWNE, B.Sc., M.D., M.R.C.S., D.P.H.
WINNIEFRED M. GRAY, M.A., M.B., Ch.B., D.P.H.
H. HOLROYD, M.B., B.S., D.P.H.
GLADYS H. HUTCHINSON, M.B., Ch.B.
J. R. JAGGER, M.B., Ch.B., D.P.H.
G. G. JOHNSTONE, M.C., M.A., M.D., B.Ch., D.P.H.
J. H. PORTER, M.A., M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.
A. V. STOCKS, M.A., M.B., B.Ch., D.P.H.
J. A. TOMB, M.B., Ch.B., D.P.H.
C. ROBERTSON WILSON, M.B., Ch.B., D.P.H.
J. G. WILSON, M.D., B.S., M.R.C.S., M.R.C.P., D.P.H.
(Resigned 31st January, 1932).
G. G. WRAY, M.D., Ch.B., D.P.H.
S. N. WRIGHT, M.Sc., M.B., Ch.B., D.P.H.

Dental Surgeons :

R. ACKERS, L.D.S.
H. J. APLEYARD, L.R.C.P., L.R.C.S., L.D.S.
J. B. DAVIES, L.D.S.
F. J. W. DEWHURST, L.D.S.
R. E. HODGSON, B.D.S.
J. KERSHAW, L.M.S.S.A., L.D.S.
W. A. LINNELL, L.D.S.
T. G. LLOYD, L.D.S.
I. F. McASH, L.R.C.P., L.R.C.S., L.D.S.
F. D. MANNERS, L.D.S.
E. V. POLLITT, L.D.S.
A. W. POOLE, L.D.S.
A. E. SHAW, B.D.S. (Appointed 1st May, 1932)
T. H. WIGNALL, L.D.S.
F. W. WILLIAMS, B.D.S.
A. CLEAVER, L.D.S. (part-time)

Ophthalmic Surgeons (part-time):

E. ALLAN, M.B., Ch.B.
H. H. BYWATER, M.D., Ch.B., D. Ch.O., F.R.C.S.(Edin.).
O. M. DUTHIE, M.D., Ch.B.
G. A. JELLY, F.R.C.S., L.R.C.P., L.S.A., D.P.H.
N. MACINNES, M.A., M.B., Ch.B.
H. G. PARKER, F.R.C.S.(Edin.), L.R.C.P., L.R.F.P.S.
J. F. PENMAN, M.B., Ch.B.
G. A. RENWICK, M.B., Ch.M.
T. SNOWBALL, M.A., M.B., Ch.B.
W. SYKES, L.R.C.P., L.R.C.S., L.R.F.P.S.
J. M. WISHART, M.B., Ch.B., F.R.C.S.(Edin.).

Honorary Consulting Orthopaedic Surgeon:

SIR ROBERT JONES, Bart., K.B.E., C.B., F.R.C.S., LL.D., D.Sc.

Orthopaedic Surgeons (part-time):

H. PLATT, M.D., M.S., F.R.C.S. T. P. McMURRAY, M.Ch., F.R.C.S.(Edin.).

Assistant Orthopaedic Surgeons (part time):

E. S. BRETNALL, M.B., F.R.C.S.(Edin.).
B. L. McFARLAND, M.D., M.Ch. (Orth.), F.R.C.S.(Edin.).
S. M. MILNER, M.A., M.B., F.R.C.S.
H. POSTON, M.B., M.Ch.

School Nurses and Health Visitors:

Mrs. M. ASHTON	Miss A. LYNCH
Miss S. BEACH	Miss M. MACDONALD
Mrs. M. R. BECKETT	Miss E. MARES
Mrs. A. BIRCHALL	Miss M. R. McLEAN
Miss A. CANTON	Miss G. MENZIES
Mrs. E. CHAMBERS	Miss I. MILNE
Miss E. CUBBIN	Miss A. I. MURPHY
Mrs. A. DEWHURST	Mrs. B. PALIN
Mrs. H. M. DEWHURST	Miss M. E. PEARSE (Appointed 1st March, 1932)
Miss H. DICKINSON	Miss D. H. PROCTER
Miss M. G. DICKINSON	Mrs. L. READ
Miss M. DUDLEY	Miss A. REEVES
Mrs. P. E. EGERTON (Resigned 31st October, 1931)	Miss D. RIGBY
Miss M. E. EVANS	Miss M. ROBINSON
Miss M. FAWCETT	Miss E. SHAW
Miss A. E. FRY	Miss M. SINGLETON
Mrs. S. GRAY	Miss G. SIZER
Miss L. M. HARTLEY	Miss A. SMITH
Miss F. M. HESELTINE	Mrs. G. SMITH
Mrs. M. A. HILTON	Miss M. E. SMITH
Miss S. N. HODGSON	Mrs. I. SOUTAR
Miss A. HOLMES	Mrs. E. C. STRINGER
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Miss A. D. IRVING	Miss F. M. UNSWORTH
Miss M. KENNEDY	Miss E. A. WALKER
Miss E. KNOWLES	Miss A. WALTERS
Miss M. LAMB	Miss J. M. WEBSTER
Miss E. M. LAWLEY	Miss G. J. WELLARD
Miss C. E. LAYCOCK	Miss S. E. WRIGHT

Orthopaedic Nurses:

Miss M. M. BRENNAN (Appointed 8th June, 1931).
Mrs. E. J. BROMLEY Miss E. H. ELKINGTON
Mrs. F. WORRELL

BIDDULPH GRANGE ORTHOPAEDIC HOSPITAL.

Senior House Surgeon:

BRENDA G. HALLETT, M.R.C.S., L.R.C.P., F.R.C.S.(Edin.), (Resigned Jan., 1932)
ISABEL VALLANCE, M.R.C.S., L.R.C.P. (Appointed Feb., 1932)

Junior House Surgeon:

HELEN M. DICK, M.B., Ch.B.

Matron:

Miss M. ROCHELL.



LANCASHIRE EDUCATION COMMITTEE.

SCHOOL MEDICAL SUB-COMMITTEE.

— TWENTY-THIRD ANNUAL REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER, *For the Year ended 31st December, 1931.*

ADMINISTRATION.

The area of the Administrative County of Lancaster for Elementary Education purposes is 941,751 acres, and the population is 957,341, of whom the average number on the Roll of Elementary Schools is 128,488, and the average number in attendance is 112,893; the average attendance in the previous year was 113,618.

For Higher Education and General Purposes the population is 1,794,857, while for Child Welfare purposes it is 772,819.

The following districts are autonomous for Elementary Education purposes and, therefore, do not come within the scope of this Report except for Higher Education:—

Nineteen Municipal Boroughs;

The Urban Districts of Chadderton, Farnworth, Hindley, Ince-in-Makerfield, Radcliffe, Stretford, Swinton and Pendlebury, and Waterloo-with-Seaforth.

The combined population of these Boroughs and Urban Districts is estimated to be 837,516.

In the Administrative County there are 679 schools, composed of 534 voluntary and 145 council schools, in which there are 908 Departments. Of these 679 schools, 302 are classed as Rural schools, and the remaining 377 as Urban schools. Many of the schools in the rural districts are a considerable distance from the nearest railway station.

To the great regret of the Staff, Dr. R. H. W. Fisher, who had been in the service of the County since March, 1913, was compelled by ill-health to resign the post of Chief Assistant County Medical Officer.

Dr. F. Hall has since been selected to fill the vacancy thus created.

CO-ORDINATION OF THE WORK OF THE SCHOOL MEDICAL SERVICE WITH THAT OF OTHER HEALTH SERVICES.

The County Medical Officer of Health is School Medical Officer and Chief Medical Officer to the Public Assistance Committee. There are two Senior Assistants under him whose departmental duties are those of:—

1. (a) School Medical and Child Welfare Services.
(b) Blind Persons Act.
2. (a) General Public Health.
(b) Public Assistance.
(c) Midwives Acts.

One woman Assistant Medical Officer is fully employed in the inspection of secondary school girls. The remaining Medical Officers are normally 18 in number, and in their dual capacity of Assistant Medical Officers of Health and Assistant School Medical Officers deal with all the problems of Public Health and School Medical Inspection, except those relating to Tuberculosis.

Co-ordination in this latter branch is, however, maintained both at the Central Office and in the "field" by referring to the Tuberculosis Officer or notifying any cases of doubtful or evident disease respectively.

A later development of Medical Service, due in part to the increase in the numbers of the County Council workmen, is the examination and report to the Central Office concerning injuries to workmen which fall under the heading of the Workmen's Compensation Act. Although these cases are comparatively few in number they demand care, time and expert knowledge and offer further justification, if any were needed, of the policy of the Committee in seeking to attract to its service men of the highest qualifications.

The School Nurses are also Health Visitors and Inspectors of boarded-out children under Part I. of the Children Act, 1908, and it is unnecessary to add to the account of their duties any more than was contained in the Annual Report of 1930.

The following table shows the work done by the Nurses as Health Visitors during the year 1931 :—

HOME VISITS—							
<i>(Infants under one year)—</i>							
No. of 1st Visits	...	...	...	...	...	...	10,560
No. of Re-visits	...	...	...	...	...	...	41,580
<i>(Children 1—5 years of age)—</i>							
No. of Visits	...	...	...	...	...	...	33,114
ANTE-NATAL WORK—							
<i>(Expectant Mothers)—</i>							
No. of 1st Visits	...	...	...	...	...	...	2,230
No. of Re-visits	...	...	...	...	...	...	2,448
OTHER VISITS—							
Special Visits to Older Children, Medical Officers of Health, &c.							1,172
VISITS TO CASES OF OPHTHALMIA NEONATORUM AND OTHER MATTERS.							301
VISITS TO CASES UNDER CHILDREN ACT, 1908 (Part I.)							303

During the year 4 new Child Welfare Centres were opened and the list of those which have been established to date is as follows :—

Abram	Church	Lathom and	Prescot
Adlington	Clayton-le-Moors	Burscough	Rishton
Aspull	Clifton	Leyland (2)	Sabden
Atherton	Coppull	Litherland	Skelmersdale
Audenshaw	Crompton	Littleborough	Standish
Bamber Bridge	Dalton-in-Furness	Little Lever	Thornton
Barrowford	Davyhulme	Longridge	Cleveleys
Barton	Droylsden	Milnrow	Tottington
Billinge	Feniscowles	Morecambe	Trawden
Blackrod	Fleetwood (2)	Norden	Ulverston
Briercliffe	Flixton	Ormskirk	Urmston
Bromley Cross	Haydock	Orrell	Walkden
Burtonwood	Irlam (2)	Oswaldtwistle (2)	Waterloo
Carnforth	Kearsley	Padiham	Whalley
Catforth	Kirkham	Poulton-le-Fylde	Whitefield
Chipping		Preesall	Whitworth

With the exception of Morecambe the County Council is also the Education Authority in the districts where these Centres have been established. The Assistant County Medical Officers are, as a rule, in charge of these Centres, but in a few cases the local Medical Officers of Health have remained in charge of the Centres.

In the following districts the Child Welfare and Maternity work is done by the local district Sanitary Authority :—

Ashton-in-Makerfield	Prestwich
Brierfield	Ramsbottom
Denton	Royton
Golborne	Tyldesley
Great Harwood	Upholland
Horwich	Westhoughton
Newton-in-Makerfield	

In these districts the County Council is the Authority for Elementary Education.

The Voluntary Helpers continue to assist with the social work which is carried on at the Centres, and the County is very grateful to these women who give up so much of their time in helping the smooth administration of what is very often an extremely busy Centre.

Instruction in Mothercraft continues at certain of the Centres on the lines previously described in previous Reports.

The following table gives a statistical summary of the work done in the Centres during the past year :—

SUMMARY OF ATTENDANCES, &c., AT CHILD WELFARE CENTRES DURING THE TWELVE MONTHS ENDED 31ST DECEMBER, 1931, TOGETHER WITH THE NUMBER OF BIRTHS NOTIFIED DURING THAT PERIOD.

Name of Child Welfare Centre.	No. of Sessions.	No. of Births Notified during the 12 months.	No. of individual children attending.			No. of attendances by children.			No. of attendances by expectant mothers.		No. of attendances by other women.	
			Under 1 year old.	From 1—2 years old.	Over 2 years old.	Under 1 year old.	From 1—2 years old.	Over 2 years old.	No. of individual expectant mothers attending.	No. of actual attendances.	No. of individual women attending.	No. of actual attendances.
Abram ...	26	106	108	59	64	861	335	427	23	55	8	15
Adlington ...	48	46	69	71	61	575	625	634	15	132	20	53
Aspull (New Springs) ...	48	111	139	50	17	1015	274	30	33	85	25	83
Atherton ...	47	299	258	171	86	1737	801	223	34	202	...	...
Audenshaw ...	49	97	148	87	82	1736	700	421	14	36	7	62
Bamber Bridge ...	48	124	118	85	103	769	448	483	33	193	124	474
Barrowford ...	48	40	84	61	56	734	259	186	4	7	20	41
Barton ...	12	9	27	19	30	81	48	61	2	3	16	84
Billinge ...	49	56	65	39	43	594	179	175	11	38	8	13
Blackrod ...	49	30	46	29	19	562	290	101	13	50	10	85
Briercliffe ...	25	6	31	29	41	224	150	246	...	...	9	10
Bromley Cross ...	48	11	112	76	71	898	349	158	23	78	4	4
Burtonwood ...	48	43	36	16	18	326	128	125	6	22	8	12
(a) Carnforth ...	37	51	71	28	54	433	156	189	7	25	...	...
Catforth ...	13	12	28	15	26	76	33	54	9	11	16	42
Chipping ...	22	17	19	16	19	158	102	92	5	9	8	44
Church ...	47	58	102	57	63	1175	378	283	16	80	21	250
Clayton-le-Moors ...	46	109	72	41	25	675	409	236	12	91	22	287
Clifton ...	49	48	46	25	14	727	270	140	4	11	...	...
Coppull ...	48	88	99	70	97	1081	745	852	21	96	10	436
Crompton ...	47	177	168	75	72	1818	613	461	11	45	...	...
Dalton ...	48	142	206	166	153	1404	1065	876	67	282	...	...
Davyhulme ...	45	54	83	55	44	1083	479	369	18	90	20	104
Droylsden ...	47	183	263	92	72	3482	682	414	14	43	12	63
Feniscowles ...	49	8	46	22	33	461	133	200	3	16	13	51
Fleetwood (No. 1) ...	49	432	169	93	109	1614	608	819	15	60	4	11
Fleetwood (No. 2) ...	49	...	298	135	168	2616	957	1023	13	66	...	...
Flixton ...	45	124	150	89	104	1863	803	831	19	153	38	226
Haydock ...	49	221	117	28	17	1173	237	74	17	74	18	37
Irlam (Long. Lodge) ...	25	208	127	45	12	1141	283	69	13	89	20	270
Irlam (Irlam Hall) ...	24	...	144	40	3	1136	260	31	11	45	25	261
Kearsley ...	48	131	208	156	117	2216	668	218	63	234	...	...
Kirkham ...	48	85	167	117	54	1414	646	277	21	53	42	126
(b) Lathom & Burscough ...	8	23	29	6	7	120	13	10	2	4	1	2
Leyland (Brad. St.) ...	22	134	14	13	23	104	79	201	...	...	17	224
Leyland (Quin St.) ...	45	...	156	93	99	1373	667	740	11	71	13	352
Litherland ...	49	268	220	89	125	2088	494	529	13	34	...	...
Littleborough ...	48	168	231	120	92	2361	691	525	9	25	10	32
Little Lever ...	48	47	104	42	26	1299	463	125	16	50	40	183
Longridge ...	46	53	102	81	85	833	423	342	9	48	8	312
Milnrow ...	49	87	113	56	57	1380	341	474	5	21	21	41
Morecambe ...	48	273	202	92	81	1768	890	691	31	136	...	...
Norden ...	49	44	73	35	39	1121	395	493	11	82	26	80
Ormskirk ...	48	131	130	63	73	1455	554	550	28	96	...	...
Orrell ...	47	87	119	67	74	1248	663	494	9	26	9	12
Oswaldtwistle ...	47	182	151	61	36	1267	427	469	23	94	58	552
Oswaldtwistle (Belthorn) ...	4	...	4	5	8	10	11	16	2	2	11	17
Padiham ...	49	159	120	82	52	1010	434	309	7	16	23	58
Poulton-le-Fylde ...	25	29	41	41	68	293	284	581	11	62	32	68
(c) Preesall ...	22	40	55	44	61	487	395	502	13	40	59	245
Prescot ...	72	167	329	212	176	2239	506	561	92	307	15	71
Rishton ...	48	61	58	37	42	510	283	235	7	43	15	198
(d) Sabden ...	2	1	7	4	2	10	6	3	2	2	...	...
Skelmersdale ...	49	109	94	48	45	939	293	230	7	32	28	124
Standish ...	48	113	129	82	90	1427	721	701	18	95	61	179
Thornton Cleveleys ...	47	144	120	75	87	1039	462	646	21	94	31	125
Tottington ...	49	83	82	40	52	852	429	482	10	76	12	118
Trawden ...	49	17	38	34	33	249	143	263	2	4	8	19
Ulverston ...	48	130	209	133	160	1767	904	1105	68	342	...	...
Urmston ...	49	141	111	63	53	1430	623	322	9	29	35	67
Walkden ...	48	135	177	67	32	1486	371	119	3	3	54	204
Waterloo ...	26	38	67	41	37	505	302	161	7	24	41	56
Whalley ...	48	12	69	41	41	728	319	269	7	29	25	227
Whitefield ...	44	118	198	110	63	1786	724	439	15	46	1	1
Whitworth ...	47	119	126	58	45	1638	760	602	17	86	31	78
TOTAL ...	2708	6239	7502	4192	3911	70680	28183	23967	1055	4493	1213	6789

(a) Carnforth Child Welfare Centre opened 6th March, 1931.

(b) Lathom and Burscough Child Welfare Centre opened 30th October, 1931.

(c) Preesall Child Welfare Centre opened 19th February, 1931.

(d) Sabden Child Welfare Centre opened 3rd December, 1931.

There is still very much unemployment in this part of the country, and, consequently, there is a large quantity of milk or milk products supplied free at, or through, the Welfare Centres to necessitous nursing mothers, women in the last few months of pregnancy, and infants and young children; and during the year £9,400 was so spent. This is a slight decrease on the previous year's expenditure. The conditions under which a free supply is given are those of medical necessity coupled with the inability to purchase the necessary foodstuffs.

During the year 1931, 711,650 pints of fresh milk were supplied directly to the recipients by milk purveyors, and the following tabular statement shows the amount of dried milks, cod liver oil, Virol, etc., supplied at the Centres:—

No.	Units.	Article of Foodstuff.	Cost.	
			£	s. d.
37,724	1 lb. packets	Cow and Gate (F.C.)	2,844	14 7
16,898	1 lb. cartons	C.L.O. and Malt	547	9 4
11,843	8 oz. tins	Virol	592	3 0
8,819	1 lb. tins	Ostermilk	671	13 4
5,254	1 lb. bottles	Horlick's Malted Milk	660	3 10
3,722	8 oz. tins	Ovaltine	247	2 7
2,880	1 lb. packets	Ambrosia	218	16 8
2,420	1 lb. packets	Glaxo	183	19 4
1,932	1 lb. packets	Trufood (Humanised)	194	0 0
1,734	4 oz. bottles	Cod Liver Oil	35	16 4
1,654	8 oz. and 1 lb. bottles	C.L. Oil Emulsion	105	0 1
1,505	1 lb. packets	Trufood (F.C.)	119	15 0
1,496	7 oz. tins	Virolax	76	2 8
1,040	4 and 8 oz. bottles	Aberdeen Emulsion	39	3 0
920	1 lb. packets	Chocolate Milk	70	6 5
845	1 lb. packets	Cow and Gate (H.C.)	57	9 6
510	1 lb. jars	Vitamalt	34	7 6
478	8 oz. tins	Maltoline	15	12 2
415	4 oz. tins	Lactagol	24	14 10
168	1 lb. tins	Almata	16	15 10
168	1 lb. packets	Lactogen	12	12 0
96	1 lb. packets	Cow and Gate (Humanised)	7	4 0
30	1 lb. tins	New Zealand Cream	3	15 0
12	1 lb. cartons	Vitamine Malt	0	14 0
			£6,779	11 0

In this statement most of the foods mentioned are sold at cost price. In necessitous cases the food is supplied either free of cost or at half-price. The total loss on the foods supplied amounted to £1,222 17s. 11d., as compared with a total loss in the previous year of £1,266 7s. 2d.

ANTE-NATAL CARE.

The County Council has only one Specialist Ante-Natal Clinic, which is held at the Litherland Child Welfare Centre, but there are arrangements with the following Local Authorities whereby persons resident in the adjacent portions of the County area may attend at the Ante-Natal Clinics established by these Authorities:—Chorley, Eccles, Rochdale and Widnes. In the rest of the County, expectant mothers may be seen by the Assistant County Medical Officers at the Child Welfare Centres. Expectant mothers who book beds in Maternity Homes generally attend the Maternity Home for examination some time before admission for the confinement, and in some cases, in-patient Ante-Natal treatment is provided.

A considerable amount of useful work is done by the County Health Visitors. In a scattered country district it is not practicable for expectant mothers to make long journeys to Clinics; but it would be a mistake to draw the inference that such women receive no attention. In addition to the private doctor and the local District Nurse, the County Health Visitor is now well known in the district and is soon in touch with any one who wishes to see her, thanks to the increasing use of the motor car as a means of transport. As a result much good advice can be given and administrative action taken without the intervention of the *ad hoc* Clinic.

As an example of what is being done in the Centres, the following is extracted from a Report by Dr. J. R. Jagger, Assistant County Medical Officer:—

"It has been the practice for the last few years to reserve an hour of the Thursday afternoon session for the purpose of consultation and examination of expectant mothers.

"During the year 1931, 63 individual cases were dealt with and 234 attendances made.

"The time at one's disposal for this work is limited, but the service appears to be a popular one, and I think the reason for its popularity is that the confidence and co-operative interest of the midwives in the district have been elicited, and the teaching at the Child Welfare Centre has had its influence in bringing many cases forward.

"We have been fortunate in dealing with a few abnormal cases, in which (by timely interference and treatment in Hospitals) we have been able to avert disasters. The majority of the ante-natal cases attending the Clinic comes primarily for some abnormality during the period of gestation. Fully half the cases are sent by the local midwives and one or two have been sent by the local practitioners. In the later months of 1931, a number have sought advice without having consulted any one previously. It is assumed from this that the ante-natal work at the Clinic has recommended itself.

"I am appending a list of abnormal conditions encountered in the 63 cases attending last year. All these conditions have been treated either at the Clinic or in Hospital.

"Hospital treatment has been found for appropriate cases at four Hospitals, and other minor conditions have been treated at Nursing Homes.

"Amongst the 63 cases there has not been a maternal death. Amongst the infants, one died of broncho pneumonia a few months after birth, and one was born dead in a case of contracted pelvis, where admission to Hospital had been delayed.

"Of the 63 cases dealt with, 27 were primiparae and 36 multiparae. The following table shows the defect found:—

Quickening (abnormal) ...	...	...	...	...	...	...	...	1
Vaginal discharge ...	...	...	...	...	...	...	...	34
Backache ...	...	...	...	...	...	...	...	7
Occipito posterior position ...	...	...	...	...	...	...	...	1
Abnormal Pelvic measurement ...	...	...	...	...	...	...	...	6
Urine (abnormal) albumin	}	...	...	...	...	...	...	12
mucin		...	...	...	...	...	...
bacilluria		...	...	...	...	...	...
Gastro intestinal. (Emesis, Gastritis) ...	...	...	...	...	...	...	...	11
Heart and Lungs. (Heart disease) ...	...	...	...	...	...	...	...	4
(Bronchitis) ...	...	...	...	...	...	...	...	6
								10
Breasts (Mastitis: retracted nipples) ...	...	...	...	...	...	...	...	4
Enlarged thyroid ...	...	...	...	...	...	...	...	8
Varicose veins ...	...	...	...	...	...	...	...	7
Carious teeth (4 or more) ...	...	...	...	...	...	...	...	14
Swelling of feet ...	...	...	...	...	...	...	...	10
Anaemia ...	...	...	...	...	...	...	...	6
Bowels (obstinate constipation) ...	...	...	...	...	...	...	...	6
Skin disease... ...	...	...	...	...	...	...	...	2

"Reviewing the list of abnormalities, it is clear that vaginal sepsis is a condition which was present in over 50 per cent. of these cases, and in my opinion it is this vaginal sepsis, coupled with slight or severe tearing due to hurried labour or instrumental interference, which is the major cause of puerperal sepsis."

OPHTHALMIA NEONATORUM.

All cases of Ophthalmia Neonatorum are under observation and care from the onset, and of late years there has been a welcome reduction in the number of those cases which become blind ultimately.

Year.	Total number of Eye Cases reported to the Local Supervising Authority under the Midwives Acts.	Total number of cases notified as Ophthalmia Neonatorum.
1924	328	154
1925	299	147
1926	344	172
1927	381	211
1928	366	191
1929	354	164
1930	312	169
1931	272	120

The duty of Midwives to report cases of Ophthalmia remains unaltered, the Midwives Act Committee of the County Council being the local Supervising Authority for this purpose.

The Assistant County Medical Officers undertook during the year the inspection of 65 Nursing Homes, the results being reported to the Public Health Department of the County Council.

The following Boroughs and Urban Districts supervise the Maternity Homes in their respective districts :—

Accrington (B.)	Lancaster (B.)
Ashton-under-Lyne (B.)	Leigh (B.)
Bacup (B.)	Lytham Saint Annes (B.)
Chorley (B.)	Middleton (B.)
Clitheroe (B.)	Morecambe and Heysham (B.)
Colne (B.)	Nelson (B.)
Darwen (B.)	Rawtenstall (B.)
Eccles (B.)	Stretford U. D.
Heywood (B.)	Swinton and Pendlebury U. D.

The service for the actual confinement of women has continued to expand. During the past year the amount paid in Doctors' fees in cases where the Midwives summoned help was £4,454 18s. 0d., of which £451 0s. 6d. is estimated to be recoverable from the patients. Arrangements are in force for receiving pregnant women, in cases where there is any difficulty, present or anticipated, or where the surroundings at home are not suitable for a confinement, at the following institutions :—

Ashton-under-Lyne Infirmary.
 Blackburn Corporation (Springfield) Maternity Home.
 Blackpool Corporation Maternity Home.
 Bolton Corporation (Haslam) Maternity Home.
 Bolton Union Townley's Hospital.
 Bootle Corporation Maternity Home.
 Burnley Corporation (Bank Hall) Maternity Home.
 Chorley Hospital.
 Chorley Public Assistance Hospital.
 Colne Hospital (Corporation).
 Davyhulme Park Hospital.
 Fulwood Sharoe Green Union Maternity Home.
 Leigh Corporation (Stone House) Maternity Home.
 Liverpool Maternity Hospital.
 Liverpool St. Hilda's Diocesan Maternity Home.
 Lytham Hospital.
 Nelson Corporation (Fern Lea).
 Oldham Corporation (Greenacres).
 Preston Royal Infirmary.
 Radcliffe Corporation (Bealey).
 Rochdale Union, Birch Hill.
 Stretford Memorial Hospital.
 Warrington Corporation (Borough General—Whitecross).
 Warrington Corporation (Latchford).
 Whiston Infirmary.
 Widnes Ethel Gossage Maternity Home.

During the past year the total number of women admitted was 198. This compares with 175, 145, 56, and 51 for the previous four years. In each case an enquiry is made by the Health Visitor into the economic and sanitary circumstances of the homes. During the year the payment for these patients amounted to £1,430 8s. 0d., of which £543 10s. 5d. was recovered from the patients.

The following table shows the improvement in the rate of infant mortality, per thousand births, during recent years in the Administrative County :—

1913	...	124	1923	...	80
1914	...	112	1924	...	81
1915	...	119	1925	...	82
1916	...	99	1926	...	80
1917	...	96	1927	...	73
1918	...	100	1928	...	69
1919	...	93	1929	...	84
1920	...	91	1930	...	64
1921	...	88	1931	...	70
1922	...	85			

THE CARE OF DEBILITATED CHILDREN UNDER SCHOOL AGE.

There has been no change in the method of caring for these children since the last report was issued. Facilities exist for their inspection and treatment at Child Welfare Centres, School Clinics, Orthopaedic Clinics, Ophthalmic Clinics, Dental Clinics, and at hospitals for the operative treatment of tonsils and adenoids. They are usually seen by the School Nurses and Health Visitors in the course of home visits, and in the mining and manufacturing districts many of them are to be found in school from the age of three onwards.

During 1931 the School Nurses visited 14,485 separate homes and as Health Visitors made 91,708 visits to homes, and during this year 3,911 children between two and five years of age made 23,967 attendances at the Child Welfare Centres.

Children under the age of three years, and, in exceptional circumstances, from three to five years, can be provided under the County Council Maternity and Child Welfare Scheme with fresh or dried milk, cod liver oil, or Virol, at cost price, less than cost price, or free, when they are certified by the Medical Officers in charge of the Child Welfare Centres to require extra nourishment.

During the last financial year a sum of £9,400 was spent on these children.

In districts where the County Council is the Authority responsible for Maternity and Child Welfare, no difference is made in practice in the facilities provided for the care and treatment of school children and for those under school age.

Dental treatment is available for expectant and nursing mothers and for children under school age.

SCHOOL HYGIENE.

The new schools provided by the Committee have every facility for a healthy school life which could be demanded reasonably. The older schools, admittedly, are in a much inferior position, but even here the correct use of whatever facilities exist can make up for many deficiencies. A clean, dustless school, with proper spacing of the children is of great assistance in the prevention of infection, coupled with the intelligent observation of slightly ailing children and the rigid exclusion, for an adequate period, of those known to convey infection, *e.g.*, cases of "sore throat." Too great a reliance is frequently placed upon chemical disinfection of the school premises, whereas in fact, the sources of infection are not in the inanimate objects in the school, but in the persons actually in attendance.

Reports are received at every inspection of any defects found in the premises, and the following table shows the improvements which have been carried out during 1931 :—

District No.	Name of School.	Particulars of Improvements.
1	Lower Allithwaite, Allithwaite C.E.	Provision of porch.
	Dalton-in-Furness, Ireleth C.E. ...	Installation of electric light.
	Egton-with-Newland, Penny-bridge C.E. ...	Reflooring.
	Kirkby Ireleth, The Burlington ...	Installation of electric light.
2	Ellel Infants ...	Reflooring.
	Ellel Mixed ...	Reflooring.
	Slyne-with-Hest ...	Provision of w.c. for teachers.
3	Stalmine Council ...	Improvement of natural lighting.
	Forton Council ...	Provision of office accommodation for teachers.
	Bilsborrow John Cross C.E. ...	Installation of electric light.
	Pilling, Eagland Hill C.E. ...	Provision of water supply.
	Upper Rawcliffe-with-Tarnacre, St. Michaels-on-Wyre ...	Reflooring.
4	Fleetwood St. Mary's R.C. ...	Erection of partition.
5	Marton Moss C.E. ...	Installation of electric light.
	Warton Endowed ...	Installation of electric light.

District No.	Name of School.	Particulars of Improvements.
6	Woodplumpton C.E.	Installation of electric light.
	Grimsargh Parochial	Installation of electric light.
	Fulwood St. Vincent's R.C.	Erection of partition.
7	Walton-le-Dale, Higher Walton C.E.	Reflooring.
	Walton-le-Dale, Brownedge R.C. ...	Provision of screen in Infants' Department.
	Penwortham, Middleforth C.E. ...	Renewal of lavatory bowls and provision of new latrines, etc.
	Much Hoole, Hoole C.E.	Installation of electric light.
	Farington Endowed	Improvement to ventilation.
8	Walton-le-Dale, School Lane C.E.	Provision of new windows in Babies' Room.
	Wiswell, Barrow Congregational ...	Reflooring and electric light.
	Great Harwood, St. Hubert's R.C.	Reflooring of Girls' Classroom.
	Oswaltdwistle, Belthorn and Daisy Green C.E.	Reflooring.
	Oswaltdwistle, Hippings Wesleyan Infants'	Reflooring.
9	Oswaltdwistle, Knuzden St. Oswald's	Reflooring and installation of electric light.
	Livesey, Cherry Tree C.E.	Reflooring.
	Livesey, Feniscowles Council ...	Reflooring.
	Brierfield, Wesley Street Council (Infants')	Provision of w.c.s for teachers.
	Old Laund Booth, Wheatley Lane Wesleyan	Reflooring.
10	Foulridge C.E.	Reflooring.
	Blacko Council	Conversion of pail closets to w.c.s.
	Dunnoekshaw, Clowbridge C.E. ...	Erection of wooden store-room in Boys' playground.
	Padiham St. Matthew's C.E. ...	Installation of electric light.
	Charnock Richard C.E.	Installation of electric light.
11	Leyland St. Mary's R.C.	Installation of electric light.
	Croston Wesleyan	Installation of electric light and improvement of ventilation.
	Bretherton Endowed C.E.	Installation of electric light.
	Whittle-le-Woods C.E.	Installation of electric light.
	Eccleston (Chorley) C.E.	Installation of electric light.
12	Lathom and Burscough, Burscough R.C.	Installation of electric light.
	Rufford C.E.	Installation of electric light.
	Bispham (Ormskirk) Free Grammar	Installation of electric light.
	Ormskirk St. Anne's R.C.	Installation of roof light.
	Halsall C.E.	Installation of electric light.
13	Rufford, Holmeswood Wesleyan	Improvement of ventilation.
	Aspull St. John the Baptist's ...	Reflooring.
	Aspull, New Springs Council ...	Fencing of portion of main site.
	Shevington, Crooke Council ...	Renewals to washbowls.
	Aspull Holy Family R.C.	Erection of partition.

District No.	Name of School.	Particulars of Improvements.
19	Upholland, Digmoor	Installation of electric light.
	Upholland Infants'	Reflooring.
	Ashton-in-Makerfield St. Peter's C.E.	Reflooring.
	Ashton-in-Makerfield St. Thomas ...	Reflooring.
	Abram C.E.	Reflooring.
20	Turton C.E.	Reflooring.
	Turton, Edgworth Wesleyan ...	Reflooring and extension of platform in main room.
21	Horwich Our Lady of the Rosary R.C.	Reflooring.
	Westhoughton, Hart Common C.E.	Reflooring.
	Westhoughton Parochial	Reflooring.
	Horwich, Lord Street Council ...	Installation of electric light.
22	Kearsley Moor C.E.	Installation of electric light.
	Kearsley Mount Wesleyan	Installation of electric light.
	Little Hulton, Peel St. Paul's C.E.	Reflooring.
	Kearsley West Council	Installation of electric light.
23	Ramsbottom, Summerseat Wesleyan	Reflooring.
	Ramsbottom Central Council ...	Removal of gallery.
24	Tottington, Hawkshaw Lane C.E.	Reflooring.
	Tottington, Walshaw C.E.	Alteration to playground.
	Tottington, Holly Mount R.C. ...	Installation of electric light.
25	Prestwich R.C.	Installation of electric light.
	Prestwich, Heaton Park Council ...	Installation of electric light.
26	Milnrow C.E.	Conversion of offices to water carriage system.
	Whitworth C.E.	Reflooring.
	Whitworth, Shawforth	
	St. Michael's	Conversion to w.c.s.
27	Crompton, High Crompton C.E. ...	Reflooring.
	Royton St. Aidan's R.C.	Reflooring.
	Royton St. Anne's C.E.	Reflooring.
28	Great Crosby, Halsall Girls	Reflooring.
	Little Crosby R.C.	Installation of electric light.
	Litherland R.C.	New site for offices and playground.
29	Huyton and Roby C.E.	Installation of electric light.
	Rainford, Bushey Lane	Reflooring.
	Prescot Council	Removal of gallery.
	Bold Clock Face Colliery	Installation of electric light.
30	Haydock R.C.	Reflooring.
	Haydock C.E.	Installation of electric light.
	Newton-in-Makerfield St. Peter's C.E.	Reflooring.
	Newton-in-Makerfield, Wargrave Vulcan Foundry Infants' C.E. ...	Reflooring.
	Burtonwood St. Paul of the Cross R.C.	Installation of electric light.
31	Astley C.E.	Installation of electric light.

District No.	Name of School.	Particulars of Improvements.
34	Worsley, Swinton All Saints' Mixed and Infants' C.E. ...	Installation of electric light.
	Worsley, Little Hulton St. John's Ellesmere	Reflooring.
33	Urmston C.E.	Reflooring.
	Urmston Council	Reflooring.
	Irlam Endowed	Provision of new infants' cloakroom.
35	Denton, Haughton Green C.E. ...	Installation of electric light.
	Lees, Crossbank, Hey St. John's C.E.	Conversion of offices.

NOTE.—The item "reflooring" is intended to cover either the whole school floor or a classroom.

ARRANGEMENTS FOR WARMING FOOD AND SERVICE OF MEALS IN SCHOOLS.

Nearly all schools have now facilities for making hot drinks and many of them have also facilities for warming any food which may be brought for the mid-day meal.

In view of the isolated position of many of the schools and the comparatively long distances which some of the children attending such schools have to travel before they arrive, the Education Committee has endeavoured to arrange for facilities to be provided for these children to take their mid-day meal in school. The need for this provision is not now so great in view of the schemes of re-organisation which are maturing, whereby children are transferred from the smaller schools to attend the new or re-organised Senior Schools where ample provision is made for the mid-day meal. Thirteen applications, as compared with 20 in 1930, were approved for oil or gas cooking stoves, and there are now 151 schools with this equipment, which ensures that the children at these schools may have food warmed and a hot drink provided at mid-day.

MEDICAL INSPECTION.

ARRANGEMENTS FOR AND METHODS OF INSPECTION.

The following Table shows the number of Schools, Departments, &c., on December 31st, 1931 :—

No. of Council Schools	...	...	...	...	145	
No. of Non-provided Schools	...	...	...	...	534	
Total number of Schools	...	...	...	...	—	679
No. of Departments in Council Schools	...	...	...	...	218	
No. of Departments in Non-provided Schools	...	...	...	...	690	
Total number of Departments	...	...	...	...	—	908
Accommodation	...	...	...	...	...	197,084
Average number on Roll	...	...	...	...	...	128,488
Average Attendance	...	...	...	...	...	112,893
No. of Teachers	...	...	...	...	...	4,147

The "Routine" groups examined are :—

- (1) "Entrants," i.e., those who first enter upon school life and whose ages are usually from 5—6 years.
- (2) "Intermediates," i.e., those who have attained the age of 8—9 years.
- (3) "Leavers," i.e., those of 12—13 years.

In addition to these "Routine" groups there are "Specials" of other ages who are presented by Teachers, School Attendance Officers, Parents, or picked out by Medical Officers and Nurses for some special defect, and finally there are re-examinations of those found at a previous examination to need treatment or observation for a variety of defects.

Included in the groups of "Specials" or re-examinations are those children seen at School Clinics by the Medical Officers. Any parent who wishes to be present at the examination of his or her child may do so, but accommodation is limited, and, usually only those parents come who are sent for by the Medical Officer on the discovery of some defect which requires correction.

The following tables show the work done in Elementary Schools by the Assistant Medical Officers and Nurses during 1931 :—

ROUTINE MEDICAL INSPECTION OF ELEMENTARY SCHOOLS.

No. of Schools visited	...	...	...	591
No. of Departments visited	...	...	...	791
No. of "Entrants" examined—				
Boys	...	...	...	6,403
Girls	...	...	...	6,379
				12,782
No. of "Intermediates" examined—				
Boys	...	...	...	6,574
Girls	...	...	...	6,625
				13,199
No. of "Leavers" examined—				
Boys	...	...	...	5,057
Girls	...	...	...	5,241
				10,298
No. of "Specials" examined—				
Boys	...	...	...	4,471
Girls	...	...	...	4,642
				9,113
No. of Children examined ("Entrants," "Intermediates," "Leavers," and "Specials")—				
Boys	...	...	...	22,505
Girls	...	...	...	22,887
				45,392
No. of Children re-examined	...	...	...	16,039
No. of Parents interviewed as part of the systematic inspection	...	...	...	5,656
No. of Homes visited	...	...	...	150

The above table refers only to the work done at routine medical inspections.

The following table shows the work done in Elementary Schools, etc., by the Medical Officers at visits other than routine visits :—

No. of re-visits paid to schools	...	...	...	656
No. of re-inspections of children at re-visits to Schools, or at School Clinics	...	...	...	27,178
No. of examinations of "Specials" at re-visits to Schools, or at School Clinics	...	...	...	20,765
No. of interviews with parents at re-visits to Schools, or at School Clinics	...	...	...	22,967
No. of visits to homes	...	...	...	495

The following table shows the work done in Elementary Schools by the Nurses ; it does not include visits or work done when they were accompanying the Medical Officers :—

No. of visits paid to schools	...	...	...	4,323
No. of examinations of children in schools	...	...	...	193,346
No. of examinations of verminous children...	...	...	...	8,957
No. of examinations of children with ringworm	...	...	...	247
No. of interviews with parents at school	...	...	...	1,198
No. of visits to homes	...	...	...	14,485

The Register of Defective Children—cripples, blind, deaf and dumb, epileptics and mental defectives—has been kept up-to-date, and the Table will be found at the end of this Report.

The Teachers are extremely helpful in the work of Medical Inspection, and it may now be said that there are few instances in the whole County where the teachers do not take a great interest in the work and render valuable assistance by noting defects and giving what help they can to remedy them.

FINDINGS OF MEDICAL INSPECTION.

The following tables show the findings of the routine medical inspection, i.e. the formal and systematic inspection made annually of all the age groups prescribed by the Board of Education.

The first table shows in percentages the results of the inspection of these "Routine" groups only :—

		ENTRANTS. (Ages 3, 4, and 5.)		INTER- MEDIATES. (Age 8.)		LEAVERS. (Ages 12, 13, and 14.)	
		Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
No. Examined		6403	6379	6574	6625	5057	5241
Mental Condition.	Children having Defects.....	56.5	56.6	55.4	59.8	46.9	53.8
	Dull and Backward	T ...	...	0.08	0.03	0.1	0.1
	Feeble-minded	O 1.0	0.7	1.7	1.0	1.9	1.0
	Imbeciles	T ...	...	0.02	...	0.02	0.02
	Idiots	O 0.08	0.03	0.1	0.2	0.3	0.1
	Malnutrition	T 0.02	...	...	...	0.02	...
	...	O ...	...	0.02	...	...	0.06
	...	T ...	...	...	...	...	...
	...	O 0.02	...	...	...	...	...
	...	T 0.4	0.3	0.3	0.3	0.3	0.2
Unclean- liness.	Head	O 1.1	0.9	1.6	1.7	0.9	0.8
	Body	T 0.5	2.9	0.5	3.0	0.2	1.8
	...	O 1.4	7.4	1.0	10.3	0.6	8.3
	...	T 0.2	0.3	0.3	0.3	0.4	0.2
	...	O 0.5	0.6	0.5	0.6	0.5	0.5
	Ring-worm.	T 0.1	0.1	0.03	0.05	...	...
	Head	O ...	...	...	...	...	...
	Body	T 0.08	0.1	0.09	0.06	0.04	0.06
	...	O ...	0.03	...	...	...	...
	Scabies	T 0.05	0.1	0.06	0.08	0.08	0.06
Skin.	Impetigo	O ...	...	0.03	...	...	...
	...	T 1.2	1.0	0.8	0.6	0.5	0.3
	Other Diseases	O 0.2	0.09	0.2	0.08	0.08	0.02
	(Non-Tubercular)	T 0.8	0.8	0.9	0.8	0.6	0.9
	Defective Vision	O 0.6	0.5	0.6	0.6	0.7	0.6
	...	SP 0.4	0.4	6.0	7.0	6.0	8.2
	Squint	O 0.4	0.7	7.3	8.2	7.7	9.1
	...	T 1.1	1.0	0.5	0.3	0.5	0.4
	Conjunctivitis	O 1.0	1.4	0.7	0.8	0.8	0.5
	Blepharitis	T 0.1	0.09	0.1	0.3	0.1	0.2
Eye Diseases.	...	O 0.5	0.5	0.7	0.6	0.4	0.3
	Keratitis	T 0.7	0.7	0.8	0.9	0.9	1.0
	...	O 0.4	0.3	0.5	0.6	0.3	0.3
	Corneal Opacities	T ...	...	...	...	...	0.04
	...	O ...	...	...	...	...	...
	Corneal Ulcer	T 0.02	0.02	...	0.02	...	0.04
	...	O 0.03	0.09	0.08	0.05	0.1	0.1
	Defective Hearing.....	T ...	0.02	...	...	...	0.02
	Otitis Media	O ...	...	...	...	...	...
	Other Ear Diseases	T 0.08	0.1	0.2	0.4	0.2	0.2
Ear Diseases.	...	O 0.2	0.2	0.4	0.4	0.4	0.3
	...	T 0.6	0.3	0.4	0.5	0.8	0.7
	...	O 0.08	0.03	0.1	0.09	0.2	0.1
	...	T 0.3	0.3	0.4	0.7	0.7	0.7

		ENTRANTS. (Ages 3, 4, and 5.)		INTER- MEDIATES. (Age 8.)		LEAVERS. (Ages 12, 13, and 14.)	
		Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Nose and Throat.	Enlarged Tonsils	T 1.8	1.8	1.7	2.1	1.6	1.7
	Adenoids.....	O 14.2	13.4	10.5	12.3	9.2	10.1
	Enlarged Tonsils and Adenoids..	T 0.2	0.2	0.4	0.4	0.1	0.2
	Enlarged Cervical Glands	O 1.0	1.0	0.9	0.8	0.4	0.4
	(Non-Tubercular)	T 2.0	1.5	1.4	1.2	0.8	1.1
	Defective Speech	O 2.5	3.0	1.3	1.2	0.7	0.6
		T 0.2	0.09	0.05	0.06	0.02	0.06
Teeth.	Four or more Carious	O 9.6	8.9	10.6	8.4	5.6	3.5
	Sepsis	T 0.03	...	...	0.03	0.08	0.02
	Organic	O 0.8	0.5	0.4	0.2	0.3	0.2
	Functional	T 14.2	13.6	12.0	11.2	6.3	6.1
	Anæmia	O 8.5	8.6	7.5	7.4	2.6	2.0
	Bronchitis	T 0.6	0.7	0.5	0.3	0.4	0.4
	Other Non-Tubercular Diseases..	O 0.08	0.03	0.09	0.03	0.04	...
Lungs.	Other Non-Tubercular Diseases..	T 0.03	0.02	...	0.05	0.06	0.1
		O 0.3	0.4	0.5	0.5	0.8	1.0
		T ...	...	...	...	...	...
		O 2.0	2.2	3.2	2.8	2.6	3.3
		T 0.2	0.2	0.1	0.1	0.1	0.1
		O 0.7	0.4	0.3	0.3	0.3	0.2
		T 1.2	1.0	0.5	0.3	0.3	0.2
Tuberculosis.	Other Non-Tubercular Diseases..	O 3.5	2.9	1.8	1.3	0.8	0.6
		T 0.1	0.09	0.06	0.02	0.02	0.1
		O 0.4	0.4	0.4	0.2	0.2	0.2
	Pulmonary.	T ...	...	...	0.02	...	...
	Suspected	O ...	...	...	...	...	...
	Glands.....	T 0.05	...	0.03	0.03	0.02	...
	Spine	O 0.08	0.06	0.03	0.03	0.06	0.04
Nervous System.	Non-Pulmonary.	O 0.08	0.08	0.03	0.08	0.06	0.02
	Hip	T ...	...	...	...	...	...
	Other Bones and Joints	O ...	0.02	...	0.02	...	0.02
	Skin	T ...	...	...	...	...	...
	Epilepsy	O ...	...	...	...	...	...
	Chorea.....	T ...	...	0.02	...	0.02	...
	Infantile Paralysis.....	O 0.03	0.03	0.02	0.02	0.04	0.02
Deformities.	Rickets	T 0.02	0.03	0.02	0.02	...	0.04
	Spinal Curvature	O 0.03	...	0.09	0.03	0.04	0.08
	Other Forms	T 0.05	0.08	0.02	0.05	0.04	0.04
	Other Diseases or Defects	O 0.02	0.06	0.05	0.06	0.04	0.08
		T 0.2	0.1	0.02	0.02	...	0.06
		O 1.7	0.8	0.3	0.2	0.08	0.08
		T 0.06	0.02	0.06	0.1	0.02	0.2

In addition, there is also carefully examined a group of children who are known as "Specials." These children do not fall within one of the prescribed age groups, but are specially presented, either at the school or at the school clinic, as possibly having defects, by teachers, school attendance officers, parents, &c., or are picked out by the medical officer or nurse in a general inspection of the school. The number of "Specials" examined was 29,878.

The following table shows the results of the examination of the "Specials" in 1931 :—

SPECIAL CASES.

		Boys.	Girls.			Boys.	Girls.
No. Examined		15013	14865				
Children having Defects.....		11614	11443				
Mental Condition.	Dull and Backward	T 16	11	Nose and Throat.	Enlarged Tonsils	T 242	218
	Feeble-minded	O 104	56		Adenoids.....	O 484	496
	Imbeciles	T 2	4		Enlarged Tonsils and Adenoids..	T 96	114
	Idiots	O 34	14		Enlarged Cervical Glands	O 77	97
	Malnutrition	T 2	1		(Non-Tubercular)	T 709	717
		O 6	7		Defective Speech	O 214	225
Uncleanliness.	Head	T 119	93	Teeth.	Four or more Carious	T 482	474
	Body	O 249	260		Sepsis	O 377	372
	Ring-worm.				Organic	T 123	93
	Head	T 104	53		Functional	O 9	3
	Body	O 8	3		Anæmia	T 14	13
	Scabies	T 72	114		Bronchitis	O 60	57
Skin.	Impetigo	O 1	1	Lungs.	Other Non-Tubercular Diseases.	T 6	5
	Other Diseases	T 943	711			O 268	236
	(Non-Tubercular)	O 21	6		Definite	T 43	62
	Defective Vision	T 1170	859		Suspected	O 39	56
	Squint	O 64	64		Glands.....	T 148	135
	Conjunctivitis	T 392	491		Spine	O 152	108
Eye Diseases.	Blepharitis	O 205	177	Tuberculosis.	Hip	T 34	14
	Keratitis	O 87	75		Other Bones and Joints	O 31	27
	Corneal Opacities	T 184	208		Skin	T 1	1
	Corneal Ulcer	O 58	44		Epilepsy	O 1	1
	Defective Hearing.....	T 260	288		Chorea.....	T 10	9
	Otitis Media	O 40	44	Nervous System.	Infantile Paralysis.....	O 19	14
Ear Diseases.	Other Ear Diseases	T 24	16		Rickets	T 52	40
		O 3	9		Spinal Curvature	O 23	35
		T 16	20		Other Forms	O 7	7
		O 2	2		Other Diseases or Defects	T 24	15
		T 91	88			O 93	53
		O 36	46			T 9	17
Deformities.		T 386	339			O 23	17
		O 31	13			T 145	126
		T 109	136			O 95	102
		O 11	9			T 2362	2150
						O 534	593

In addition to the children who were examined at routine, &c., inspections, whose defects are classified in the preceding tables, the Medical Officers re-examined 43,217 children who had been found defective at previous inspections. They also paid 656 re-visits to schools. The classification of these children into age groups or defect categories would serve no useful purpose, and has, therefore, not been made.

REVIEW OF FINDINGS.

The percentages shown in the following graphs are those for both treatment and observation, unless otherwise mentioned, found amongst all routine cases, and have, therefore, the defect pertaining in general to crude rates.

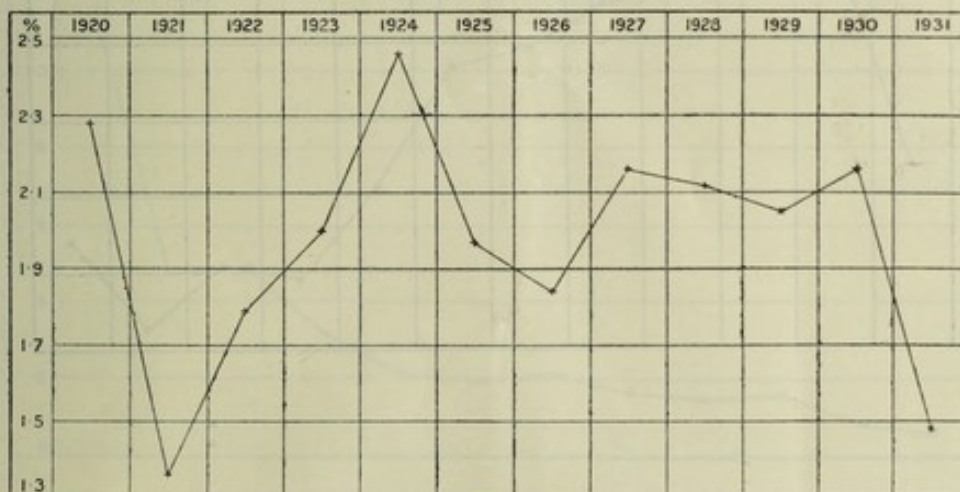
MALNUTRITION.

Throughout the year industrial conditions in the County remained depressed, and school feeding (including the supply of fresh milk, cod liver oil, etc.) continued on almost the same scale as in 1930, the expenditure being rather less than £20,000. The combined figures for "Entrants," "Intermediates" and "Leavers" show that the percentage of those suffering from malnutrition was only 1.48, the lowest figure since 1921, and a reduction by nearly one-third of the percentage in 1930. It can, therefore, be stated with some confidence that, as regards nutrition, there is a significant improvement in the routine groups as a whole. The malnutrition in the "Intermediate" group shows, as usual, a slight excess over that found amongst the "Entrants" and "Leavers."

The percentages for the years 1920-1931 are among "Routine" cases only, and are those of the grosser degrees of under-nourishment.

Year.	%
1920	2.28
1921	1.36
1922	1.81
1923	2.0
1924	2.46
1925	1.97
1926	1.84
1927	2.16
1928	2.12
1929	2.05
1930	2.16
1931	1.48

GRAPH I MALNUTRITION - ROUTINE CASES



UNCLEANLINESS.

This defect refers to verminous conditions of head and body. The percentage for all "Routine" groups in verminous conditions of the head has shown an increase, since last year, of a little more than 1 per cent., i.e., an increase from about 5.3 to 6.4. The chief offenders causing this increase are the "Intermediate" group of girls, which showed an increase from 10.8 to 13.3 per cent. It is this group, which, with few exceptions, in the last 10 years has been responsible for the relatively high figures for verminous conditions of the head. Since 1922 the number of elder girls shows a fall of 55 per cent., while the "Intermediate" group shows a fall of 40 per cent. The number of "Entrant" girls, who nearly always give a better showing than the "Intermediates," has fallen about 35 per cent.

Verminous conditions of the body show a noteworthy decrease, the percentage of "Routines", viz., 0.81 per cent. being the lowest for the last 10 years.

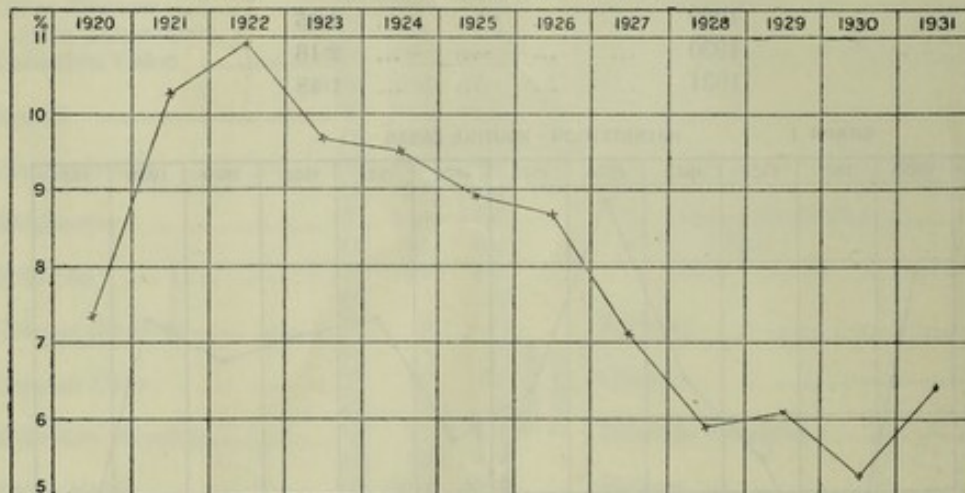
"Leaver" girls	... 0.66 per cent.	"Leaver" boys	... 0.89 per cent.
"Intermediate" girls	0.91 per cent.	"Intermediate" boys	0.85 per cent.
"Entrant" girls	... 0.83 per cent.	"Entrant" boys	... 0.72 per cent.

In this respect the girls of the "Leaver" class have the best record, viz., 0.66 per cent., compared with 0.89 per cent. for "Leaver" boys and 0.91 per cent. for "Intermediate" girls. On the whole it may be said that there has been a considerable improvement in cleanliness in the last 10 years, but it is somewhat disappointing that the improvement is not more rapid.

The percentages for Unclean Heads and Bodies are as follows:—

Year.	Heads.	Bodies.
1920	7.32	1.75
1921	10.29	1.55
1922	10.95	0.86
1923	9.7	0.84
1924	9.52	0.98
1925	8.93	1.15
1926	8.68	1.15
1927	7.06	1.15
1928	5.85	0.87
1929	6.09	1.12
1930	5.27	1.37
1931	6.41	0.81

GRAPH 2 UNCLEAN HEADS - ROUTINE CASES



RINGWORM.

Ringworm of the head is showing signs of complete disappearance. Of the 20 cases noted among the "Routine" groups 15 were in "Entrants," the "Leavers" having no cases at all. In 1922 there were 670 cases of ringworm.

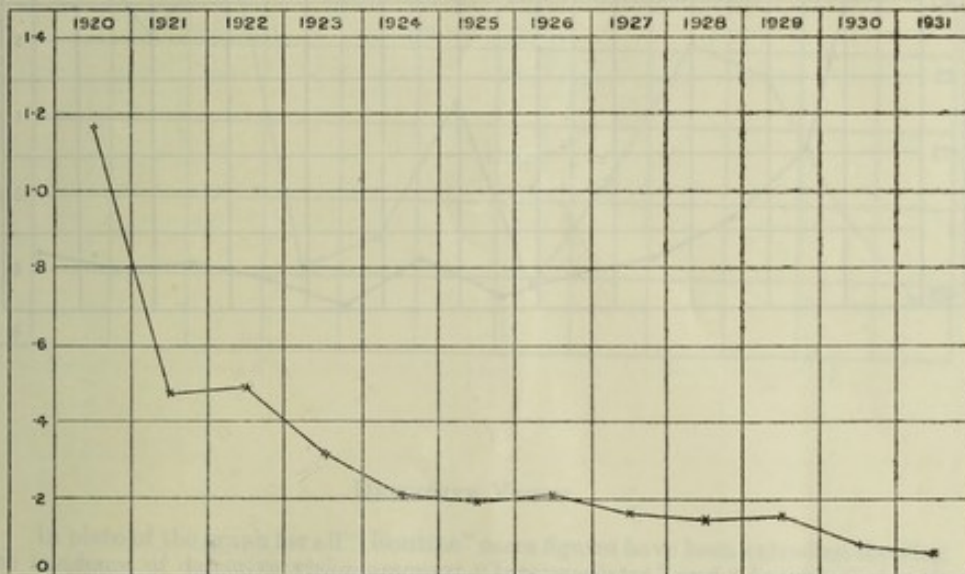
Ringworm of the body was found in 29 cases among the "Routine" groups, "Entrants" again showing the greatest numbers (14) and "Leavers" only (5).

The figures for both defects are given below.

RINGWORM.

Year.	Head.	Body.
1920	1.17	0.2
1921	0.47	0.097
1922	0.49	0.063
1923	0.32	0.121
1924	0.21	0.057
1925	0.19	0.102
1926	0.21	0.076
1927	0.16	0.079
1928	0.15	0.081
1929	0.157	0.071
1930	0.09	0.03
1931	0.06	0.08

GRAPH 3 RINGWORM OF HEAD - ROUTINE CASES



SCABIES.

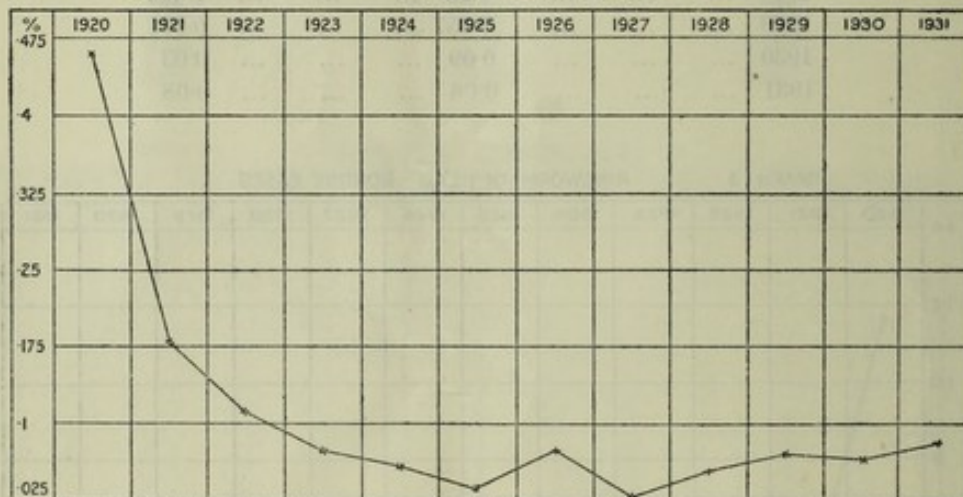
Scabies now shows little change from year to year; 30 cases only were found in the "Routine" groups in 1931.

The percentages for "Routine" cases in the last 12 years are :—

Year.	%
1920	0.46
1921	0.181
1922	0.11
1923	0.073
1924	0.057
1925	0.033
1926	0.073
1927	0.026
1928	0.057
1929	0.07
1930	0.066
1931	0.08

GRAPH 4

SCABIES - ROUTINE CASES



IMPETIGO CONTAGIOSA.

Impetigo shows a drop to 0.88 per cent., this being the lowest percentage recorded for the last 10 years. As usual, it is found to be more frequent among the boys of all the age groups than among the corresponding girls.

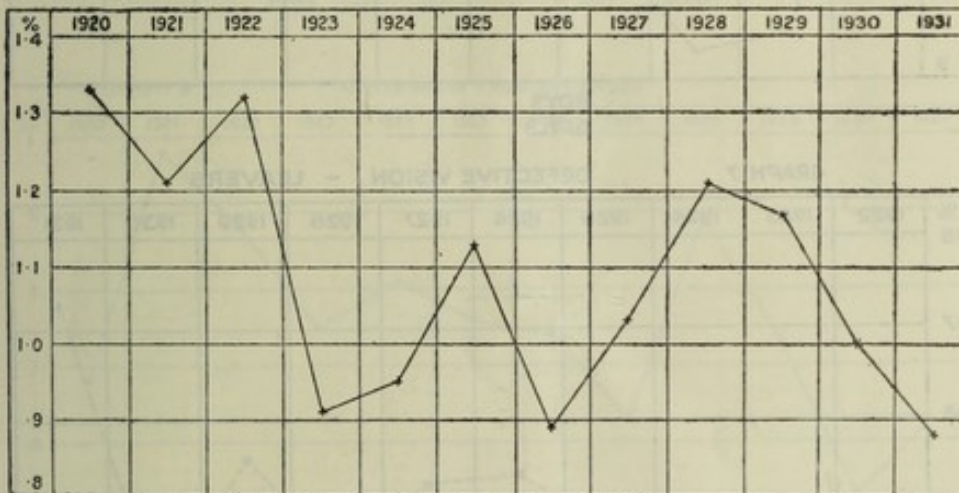
Other skin diseases, mostly of the "Eczema" group, show a total percentage of 1.39 and are fairly evenly distributed over all ages and both sexes.

The percentages amongst all "Routine" cases since 1920 are :—

Year.	%
1920	1.33
1921	1.21
1922	1.32
1923	0.91
1924	0.94
1925	1.18
1926	0.89
1927	1.03
1928	1.21
1929	1.17
1930	1.0
1931	0.88

GRAPH 5

IMPETIGO - ROUTINE CASES



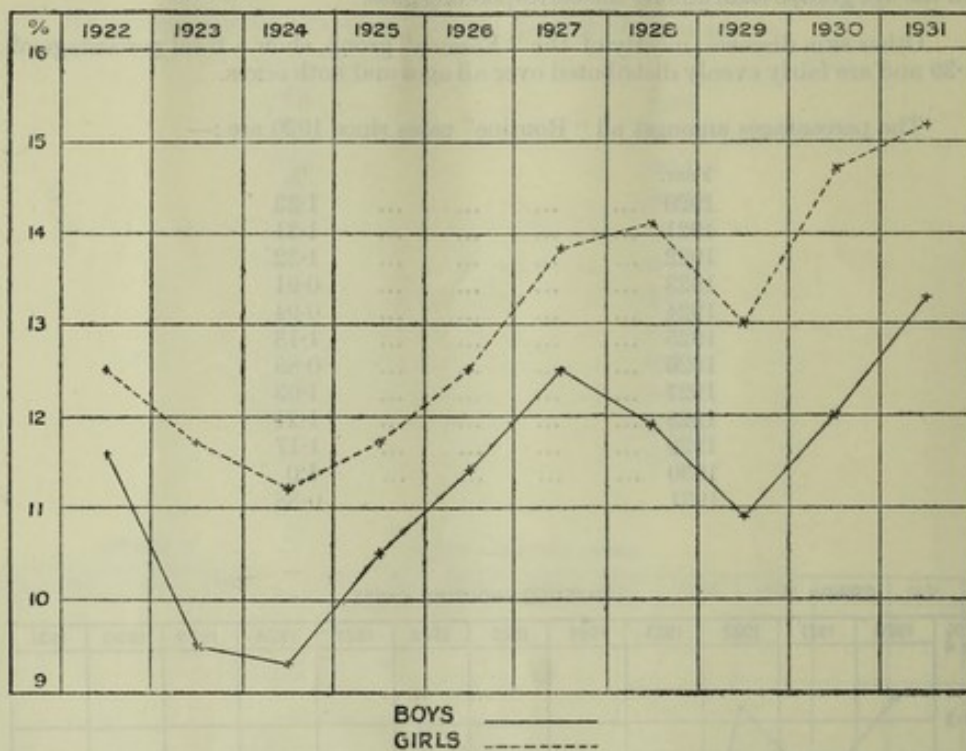
DEFECTIVE VISION.

In place of the graph for all "Routine" cases figures have been extracted showing the incidence of defective vision amongst "Intermediates" and "Leavers" of both sexes.

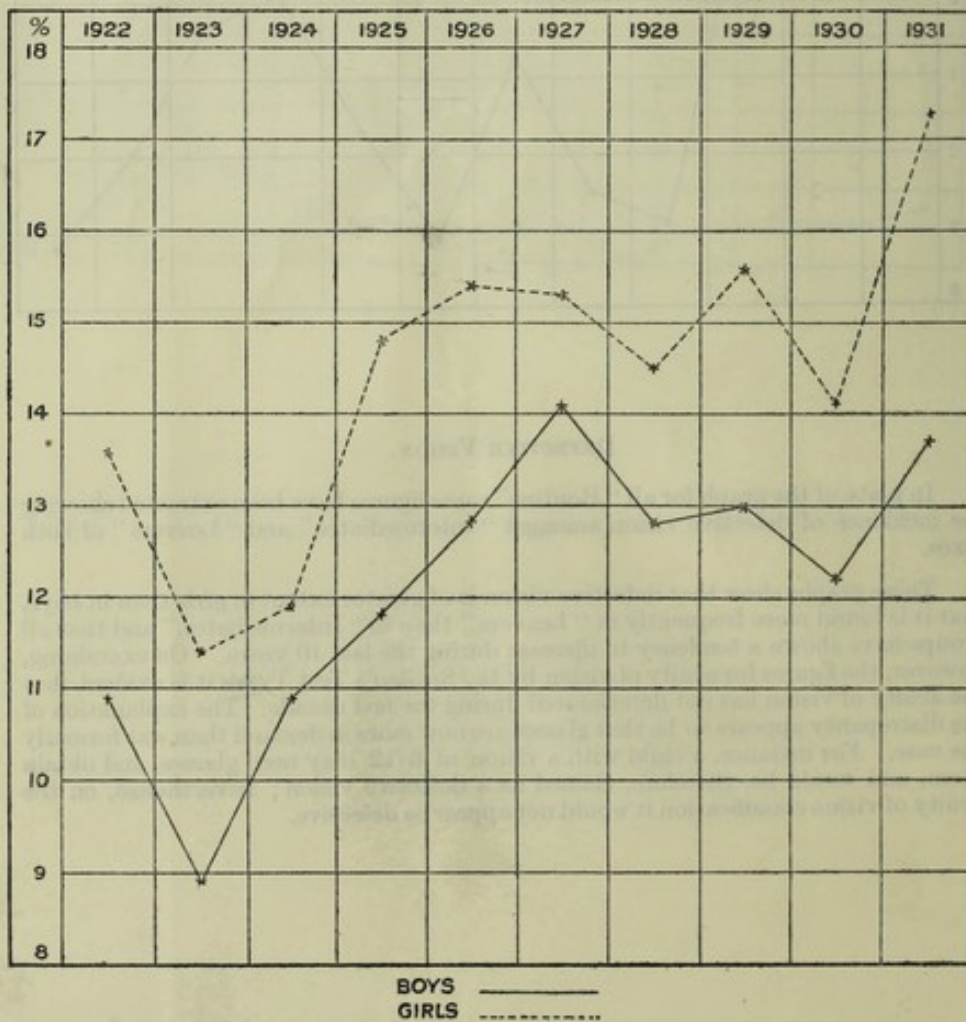
These graphs show that defective vision is of greater extent in girls than in boys, that it is found more frequently in "Leavers" than in "Intermediates," and that all groups have shown a tendency to increase during the last 10 years. On examining, however, the figures for acuity of vision by the Snellen's Test Types it is evident that the acuity of vision has not deteriorated during the last decade. The explanation of the discrepancy appears to be that glasses are now more in demand than was formerly the case. For instance, a child with a vision of 6/12 may need glasses, and obtain them, and would be, therefore, classed as a defective vision; nevertheless, on the acuity of vision classification it would not appear as defective.

The apparent increase in defective vision is, therefore, on this view rather a matter for congratulation than otherwise, as showing the greater readiness of parents to take advantage of the facilities provided by the County Council.

GRAPH 6 DEFECTIVE VISION - INTERMEDIATES



GRAPH 7 DEFECTIVE VISION - LEAVERS



OTITIS MEDIA.

For the year 1931 the incidence of Otitis Media was 0.63 per cent. of all "Routines," this figure being slightly higher than that for the previous year. There appears to be a tendency for this disease to increase during school life, although the increase is not great. For the last eight years the average incidence of "Entrants" has been 0.65 per cent., the average of "Leavers" being 0.85 per cent.

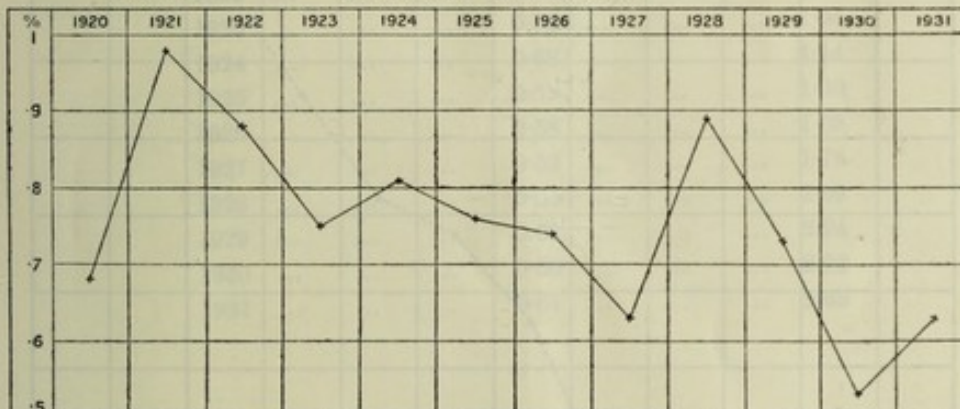
Arrangements were made during the year with the Ancoats Hospital for the operative treatment of aural defects. During the year one case received treatment for aural conditions from the Surgeon of the Hospital.

The percentages of "Routine" cases since 1920 are :—

Year.					%
1920	...	...	...	...	0.68
1921	...	...	...	...	0.98
1922	...	...	...	...	0.88
1923	...	...	...	...	0.75
1924	...	...	...	...	0.81
1925	...	...	...	...	0.76
1926	...	...	...	...	0.74
1927	...	...	...	...	0.63
1928	...	...	...	...	0.89
1929	...	...	...	...	0.73
1930	...	...	...	...	0.52
1931	...	...	...	...	0.63

GRAPH 8

OTITIS MEDIA - ROUTINE CASES



TONSILS AND ADENOIDS.

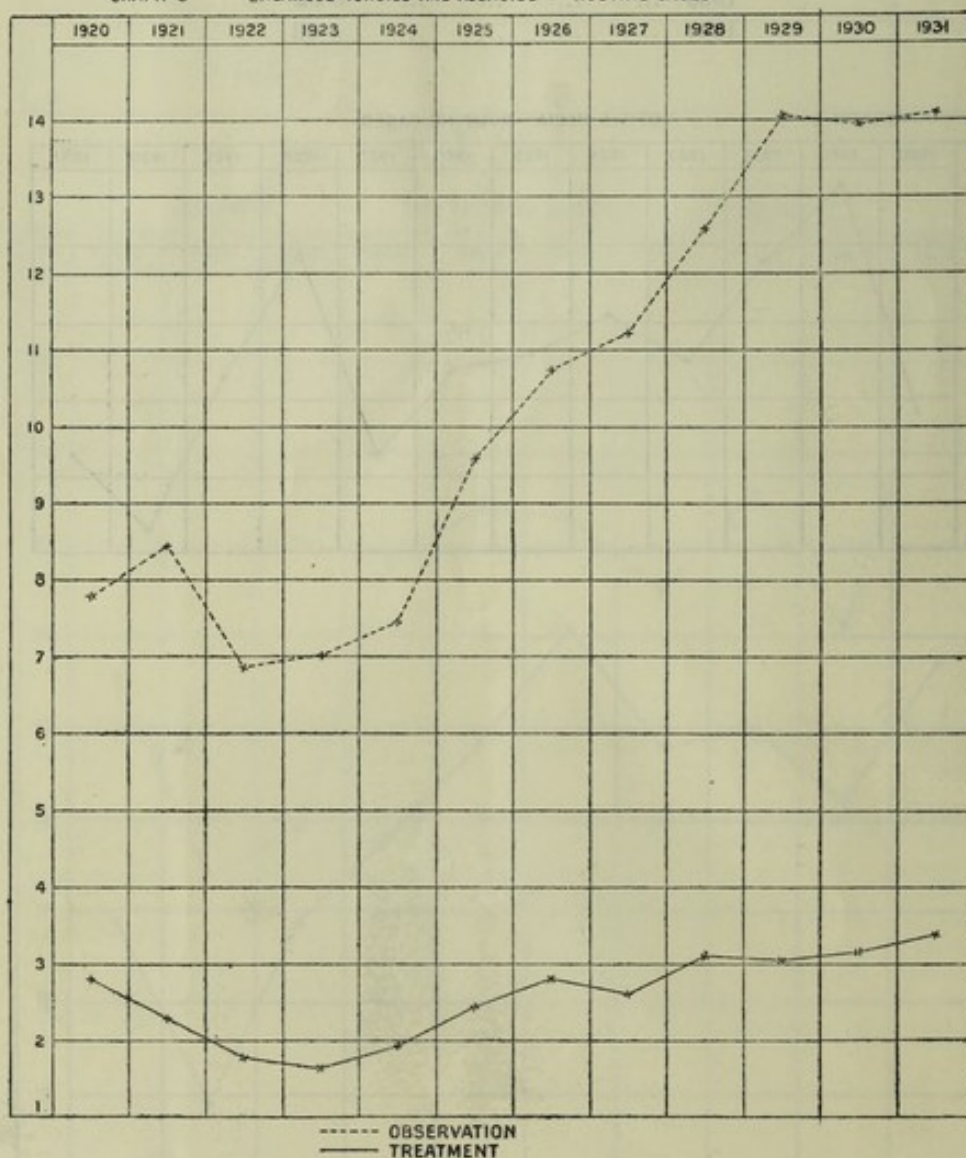
Grouping together all the tonsillar and adenoid hypertrophies it is seen that there is little change from last year in the "Routine" cases for treatment or observation. In all there were 2,165 operations performed on Elementary School children at Hospitals under the Authority's Scheme

The operation is that of enucleation of tonsils and removal of adenoids (if required), and is performed under general anaesthesia by experts in throat surgery.

The percentages are as follows :—

Year.	Treatment.			Observation.		
1920	2.82	...	...	7.79
1921	2.3	...	...	8.44
1922	1.79	...	...	6.87
1923	1.65	...	...	7.01
1924	1.93	...	...	7.46
1925	2.43	...	...	9.59
1926	2.82	...	...	10.73
1927	2.61	...	...	11.22
1928	3.11	...	...	12.57
1929	3.05	...	...	14.05
1930	3.16	...	...	13.94
1931	3.38	...	...	14.11

GRAPH 9 ENLARGED TONSILS AND ADENOIDS - ROUTINE CASES



HEART DISEASE (ORGANIC).

There is little variation in the incidence of this disease as found in the examination of the "Routine" groups. The mean percentage is 0.61 per cent., but there is a range from 0.35 per cent. among "Entrants" to 0.9 per cent. among "Leavers," and, when reference is made to the reports of the early days of school inspection, it is seen that there has always been a similar increase with advancing age; nor is there much alteration in the actual percentages of each age if it be taken for granted that the former term of "heart disease" implied only "organic heart disease."

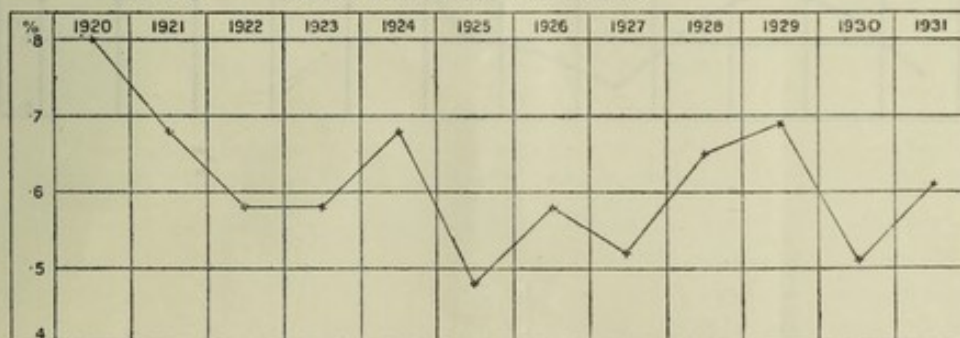
Childhood and adolescence take approximately equal shares in the deaths from rheumatic fever and heart disease in the County up to the age of 25. In the year 1930, in the aggregate of Urban Districts (including the Part III. Authorities) there were 17 deaths from rheumatic fever from 5—15 years and 17 from 15—25 years; from heart disease there were 39 and 58 deaths respectively. In the aggregate of Rural Districts with one-sixth the population of the Urban Districts, the figures in these groups were for rheumatic fever 1 and 1, and for heart disease 3 and 3 respectively.

Heart disease, however, as is well known, may last many years and the above figures for deaths give no indication of the extent of heart disease among the population. They do, however, indicate an association between urbanization and rheumatic fever and its allies, whose closer study is one of the aims of the founders of rheumatism clinics in some of the larger centres of population.

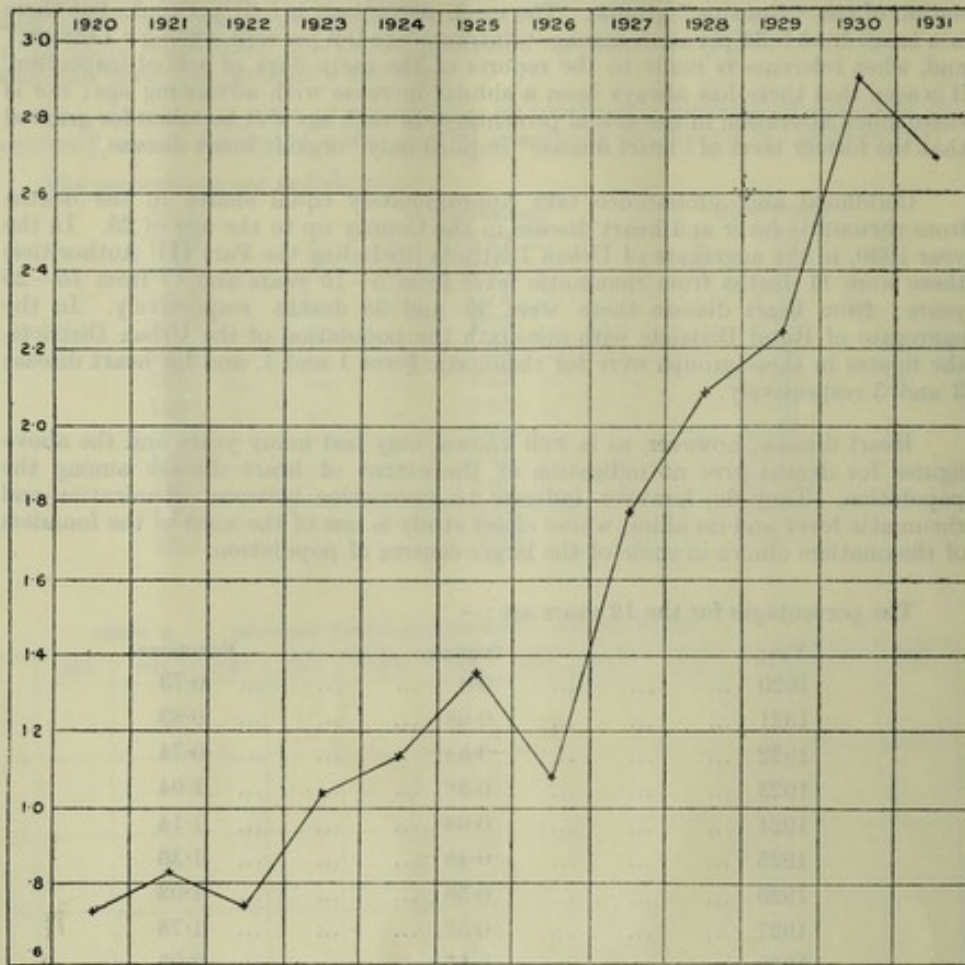
The percentages for the 12 years are :—

Year.	Organic.	Functional.
1920	0.8	0.73
1921	0.68	0.83
1922	0.58	0.74
1923	0.58	1.04
1924	0.68	1.14
1925	0.48	1.36
1926	0.58	1.08
1927	0.52	1.78
1928	0.65	2.09
1929	0.69	2.24
1930	0.50	2.92
1931	0.61	2.69

GRAPH 10 ORGANIC HEART DISEASE—ROUTINE CASES



GRAPH II FUNCTIONAL HEART DISEASE - ROUTINE CASES



RICKETS.

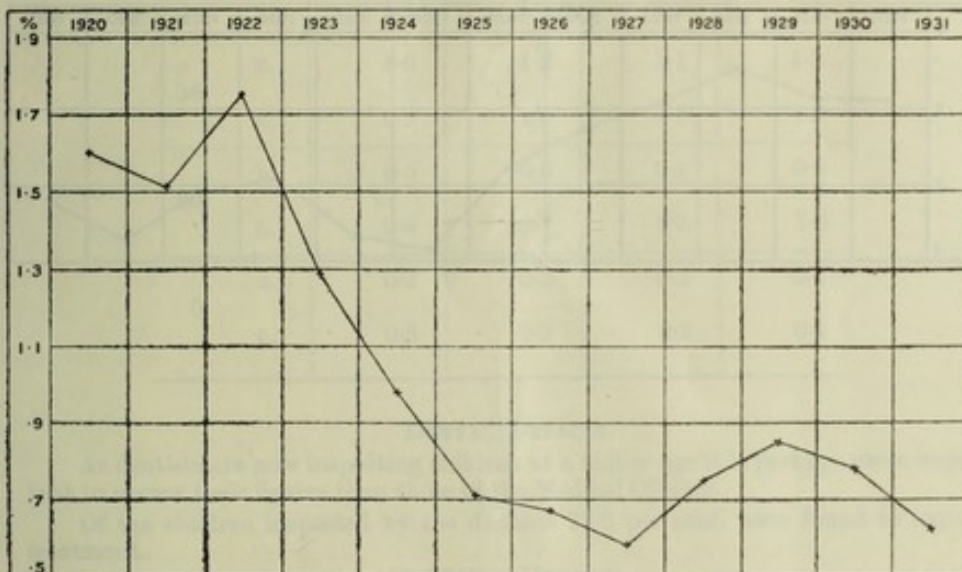
Rickets again shows a slight fall for the year. The proportion of "observation" to "treatment" cases is about 10 to 1, and entrants account for 80 per cent. of the total cases observed among the "Routines."

Other forms of deformity are noted in 2.6 per cent. of the examinations. This percentage is comprised of 97 cases of spinal curvature and 849 instances of other forms of deformity.

The percentages for 12 years are :—

Year.	%
1920	1.6
1921	1.51
1922	1.75
1923	1.29
1924	0.98
1925	0.71
1926	0.67
1927	0.58
1928	0.75
1929	0.85
1930	0.78
1931	0.62

GRAPH 12 RICKETS—ROUTINE CASES



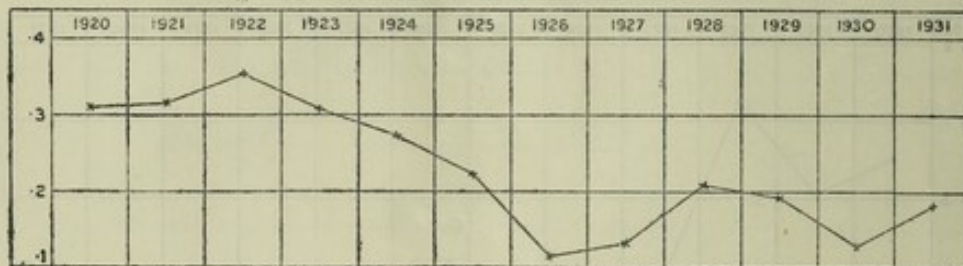
TUBERCULOSIS.

All cases needing treatment are referred to the Tuberculosis Officer for the district. Among the "Routines" examined only one case was considered to be an example of definite pulmonary tuberculosis, whilst there were 12 suspected cases. In the non-pulmonary group there were in all 67 cases of which 39 were instances of tuberculosis of the lymphatic glands. Nearly one half of these were among the "Entrants." The total percentage of non-pulmonary tuberculosis is slightly higher than that found last year, but still maintains a low level.

The percentages for the past 12 years are :—

Year.	%
1920	0.31
1921	0.315
1922	0.355
1923	0.308
1924	0.272
1925	0.223
1926	0.115
1927	0.132
1928	0.209
1929	0.192
1930	0.129
1931	0.185

GRAPH 13 NON-PULMONARY TUBERCULOSIS - ROUTINE CASES



VISUAL ACUITY.

The visual acuity of all "Intermediates" *i.e.*, children aged eight years, and all "Leavers" *i.e.*, children aged 12, 13 and 14 years, is tested by means of the Snellen Test Types and the following table summarises the results of these tests:—

		BOYS.		GIRLS.	
		Inter-mediates.	Leavers.	Inter-mediates.	Leavers.
No. Examined		6,531	5,046	6,602	5,202
6	R.	83.5	84.5	80.8	80.7
	L.	82.2	83.9	79.3	79.0
9	R.	7.8	5.7	9.0	7.5
	L.	8.8	5.9	9.8	7.6
12	R.	3.0	3.1	3.5	3.8
	L.	3.6	3.5	3.8	4.6
18	R.	2.7	2.3	3.1	2.9
	L.	2.2	2.7	3.1	3.0
24	R.	1.1	1.9	1.6	2.3
	L.	1.3	1.8	1.8	2.4
36	R.	1.0	1.2	1.1	1.3
	L.	0.9	1.0	1.2	1.5
60	R.	0.5	0.8	0.4	0.9
	L.	0.5	0.7	0.3	1.0
0	R.	0.2	0.3	0.2	0.4
	L.	0.3	0.3	0.3	0.5

DENTAL DEFECTS.

As dentists are now inspecting children at a higher age it is perhaps more important to review their figures than those of the Medical Officers.

Of the children inspected by the dentists 78.2 per cent. were found to require treatment.

CRIPPLING DEFECTS.

The following table shows in percentages the incidence of the principal crippling diseases among the children who were examined in the "Routine" age groups:—

		ENTRANTS.		INTERMEDIATES		LEAVERS.	
		Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Tuberculosis of Bones and Joints	...	...	0.02	0.05	0.06	0.06	0.08
Infantile Paralysis	...	0.06	0.14	0.08	0.11	0.08	0.11
Rickets	...	1.8	1.0	0.3	0.2	0.08	0.13
Spinal Curvature and other Deformities	...	2.3	2.5	2.6	2.1	3.1	3.2

The following table shows the position among the group of "Specials":—

	Boys.	Girls.
No. Examined	15,013	14,865
Tuberculosis of Bones and Joints ...	11	14
Infantile Paralysis	20	11
Rickets	117	68
Spinal Curvature and other Deformities	272	262

The total number of children belonging either to the "Routine" age groups or to the class of "Specials" who were found to be suffering from one of the conditions which produce crippling, is shown below:—

Tuberculosis of Bones and Joints	40
Infantile Paralysis	66
Rickets	409
Spinal Curvature	163
Other Deformities	1317
	<hr/>
	1995

It is to be noted that the above table refers to the conditions which produce crippling, and not necessarily to actual crippling; many of the conditions noted require observation only, and not active treatment.

The ascertainment of all the crippled children in the Administrative County is being actively pursued, and particulars relating to the number of crippled children of Elementary School age who had definitely been entered on the new register of cripples at the end of 1931 will be found in Table III. of the Appendix.

These figures give a very imperfect idea of the amount of crippling conditions which have to be treated under the Authority's Cripple Scheme; they take no account of the cripples under school age, and yet the incidence of the principal causes of crippling—tuberculosis, rickets, and infantile paralysis—is largely prior to school age and occurs in the first five years of life.

INFECTIOUS DISEASE.

Of administrative procedures for the prevention of infectious disease the most important are:—

- 1.—The exclusion of children suffering from, or showing symptoms suggestive of, infectious disease, or who may, it is feared, develop disease after exposure to infection;
- 2.—The closure of schools or of departments of schools.

During 1931 it was found necessary to close 68 schools on account of the prevalence of infectious disease. Every endeavour has again been made by the Assistant County Medical Officers to work in close co-operation with the local Medical Officers of Health whenever the closure of a school or department was in question.

The following tables show the number of schools which were closed during the year and the causes of closure:—

*No. of Schools Closed during 1931 by the Sanitary Authority
(Article 22 of the Code).*

Chicken-pox	4
Diphtheria	3
Influenza	32
Measles and Mumps	1
Measles	6
Mumps	3
Scarlet Fever	1
Whooping Cough	1
	<hr/>
	51

*No. of Schools closed during 1931 by the School Medical Officer
(Article 23 (b) of the Code).*

Chicken-pox	...	...	...	...	...	...	1
Defective heating apparatus	...	...	...	...	...	...	1
Diphtheria	...	...	...	...	...	...	1
Influenza	...	...	...	...	...	...	6
Measles	...	...	...	...	...	...	3
Measles and Influenza	...	...	...	...	...	...	1
Mumps	...	...	...	...	...	...	1
Scarlet Fever	...	...	...	...	...	...	1
							<hr/> 15 <hr/>

Frequently requests are made that a school should be closed because the attendance has fallen considerably. The necessity for closure is not always obvious, for in Urban areas the children have opportunities of meeting in other places than the school.

In such cases, however, the School Medical Officer is empowered, under the Education Act, 1921 (Grant Regulations, No. 8 (Amendment, No. 2, 1924)), to give certificates to any school where the attendance, on account of the occurrence of Infectious Disease, has fallen below 60 per cent. of the number of children on the Register.

The number of such certificates given during 1931 was 564.

EXCLUSIONS FROM SCHOOL.

Article 20 (b) of the Code provides for the exclusion of individual children from school on the ground that their exclusion is desirable, either in order to prevent the spread of disease, or on the ground that their uncleanly or verminous condition is detrimental to the other children.

The exclusion of individual children, as distinct from closure of the whole school, is made by the Committee's own staff.

The exclusion by the Assistant County Medical Officers and Nurses is made on a special form in triplicate. One copy is sent to the Central Office for the approval and counter-signature of the School Medical Officer; another is left in the school as authorisation for the Head Teacher and School Attendance Officer; and the third is retained by the Medical Officer or Nurse as a record. The exclusions are made for a specified period, and the children are re-examined at the end of the period, and either re-admitted as fit for school or excluded for such further period as may be necessary.

In the following table the number of children excluded under Article 20 (b) and the causes of exclusion are shown:—

Uncleanliness.		Scabies.	Ring-worm.	Impetigo.	Scarlet Fever.	Measles	Mumps.	Diphtheria.	Chicken Pox.	Phthisis	Whooping Cough.	Other Diseases	Total.
Head.	Body.												
208	12	222	120	514	11	79	126	7	190	1	60	1724	3274

FOLLOWING-UP.

During the year the Nurses as School Nurses visited 14,485 homes, and also made 193,346 examinations of school children in school, paying 4,323 visits to the schools, in addition to the visits paid to, and the work done in, the schools when they assisted the medical officers at routine inspections. As Health Visitors they paid 85,254 visits to homes, 4,678 visits to expectant mothers, 301 visits to cases of ophthalmia neonatorum, and 1,475 visits on miscellaneous matters; in the Child Welfare Centres they saw babies and young children 122,830 times, and expectant mothers 4,493 times.

MEDICAL TREATMENT.

The policy of asking parents to contribute according to their means is still followed. Cases are first of all referred to their own doctor, who treats the case if satisfactory arrangements can be made. If no treatment has been obtained within a month, the case is then referred to the Clinic, when such is available, or to Hospital, as the case may be. A nominal sum is asked for each attendance at the Clinic, but in necessitous cases no charge is made. The consent, in writing, of a parent or guardian is obtained before treatment of any kind is given.

The following table shows the number of attendances made at the various School Clinics during the past year :—

NAME OF CLINIC.	MINOR AILMENTS.				DENTAL.			OPHTHALMIC.		ARTIFICIAL LIGHT.	
	Children of School Age.		Children under 5 and not at School.		Children of School Age.	Children under 5 and not at School.	Nursing and Expectant Mothers.	Children of School Age.	Children under 5 and not at School.	Children of School Age.	Children under 5 and not at School.
	Treatment.	Inspection.	Treatment.	Inspection.							
Ashton-in-Makerfield	627	767	16	6	1943	...	...	814	8	...	...
Ashton-under-Lyne...	...	...	...	...	...	...	...	...	...	815	121
Atherton ...	583	630	...	...	954	1	...	...	...	959	1554
Audenshaw ...	1678	541	45	23	2286	8	...	441	...	...	...
Carnforth ...	460	187	36	3	753	13	29	112	6	...	...
Chorley ...	1279	164	126	21	1036	...	...	212	5	570	118
Crompton ...	1429	686	8	7	1353	10	1	405	14	...	...
Dalton ...	2843	403	196	14	1206	22	69	140	...	...	...
Davyhulme ...	172	231	4	4	437	9	...	...	...	...	...
Fleetwood ...	4173	273	124	14	1972	17	8	138	41	...	...
Great Crosby	...	...	...	...	1064	...	...	...	...	...	...
Haydock ...	1686	251	10	...	817	49	31	534	17	...	...
Horwich ...	3336	898	...	...	1219	7	26	195	...	1152	...
Irlam ...	1591	439	4	2	2295	36	41	613	21	...	...
Kearsley ...	1619	490	...	...	1848	13	3	745	19	...	...
Lancaster ...	...	...	...	...	...	...	...	13	2	...	...
Leyland ...	4413	446	520	85	1111	13	12	480	22	...	...
Litherland ...	3212	854	61	8	1787	52	41	1216	33	...	...
Littleborough	1820	455	53	25	832	6	13	437	65	...	...
Milnrow ...	1406	181	17	16	770	3	10	...	...	...	...
Ormskirk ...	3455	31	6	...	733	7	15	...	...	...	...
Orrell...	1449	471	1	7	995	10	10	536	33	...	...
Oswaldtwistle	2323	374	39	14	1243	14	15	247	3	...	...
Padiham ...	1362	303	41	6	1895	...	...	192	11	...	...
Prescot ...	1550	1590	141	67	1499	99	120	330	17	...	...
Ramsbottom	1442	269	1	4	1380	...	...	361	...	...	...
Rishton ...	2428	324	51	17	1942	5	...	321	6	...	...
Rochdale ...	...	...	...	...	...	...	...	194	21	...	...
Royton ...	3051	887	...	...	1487	...	...	513	4	...	...
Skelmersdale	...	254	...	...	...	...	...	...	...	...	...
Tyldesley ...	1172	565	5	2	1821	4	...	652	2	...	...
Ulverston ...	2924	580	289	26	1633	24	48	311	52	...	...
Walkden ...	1765	316	...	14	1726	15	9	240	2	...	...
Westhoughton	921	416	...	...	1754	12	2	366	...	232	...
Whitefield ...	1769	453	1	1	2355	17	31	534	18	...	...
Whitworth ...	2018	88	19	14	690	5	1	...	...	...	...
Total	61654	14956	1814	400	44836	471	535	11292	439	3728	1793

Total number of attendances made by children of school age ... 136,467
 Total number of attendances made by Child Welfare cases ... 5,452

Grand Total ... 141,919

The development of Medical Treatment has progressed still further, and since the last Report additional Clinics have been opened at Earlestown and Davyhulme, for the treatment of minor ailments, defective eyesight and teeth defects, and at Droylsden for the treatment of minor ailments and teeth defects.

The following is a list of the School Clinics open for treatment at the time of going to press, the kind of work which is undertaken in each being shown :—

Township.	Days and Times of Opening.			Nature of work undertaken.	Remarks.
Ashton-in-Makerfield	... Mon. ...	a.m. & p.m.	...	Dental	
		a.m. & p.m.	...	Orthopædic	... Nurse only.
	Tues. ...	a.m.	...	Minor ailments	
		p.m.	...	Orthopædic	... Surgeon attends second Tuesday in each month only.
	Wed. ...	a.m.	...	Ophthalmic	
	Thurs. ...	p.m.	...	Minor ailments	... Nurse only. Re-dressings.
Ashton-under-Lyne (a)		a.m. & p.m.	...	Dental	
	Fri. ...	a.m. & p.m.	...	Orthopædic	... Surgeon attends second Friday (a.m.) in each month only.
Ashton-under-Lyne (b)	... Mon. ...				
	Tues. ...				
	Wed. ...				
	Thurs. ...				
	Fri. ...				
Atherton	... Mon. ...	p.m.	...	Artificial light	
		p.m.	...	Minor ailments	... Nurse only. Re-dressings.
	Tues. ...	a.m. & p.m.	...	Dental	
	Thurs. ...	a.m.	...	Minor ailments	
		a.m.	...	Artificial light	
	Fri. ...	a.m. & p.m.	...	Dental	
Audenshaw	... Mon. ...	a.m.	...	Minor ailments	
	Tues. ...	a.m. & p.m.	...	Dental	
	Wed. ...	a.m. & p.m.	...	Dental	
		p.m.	...	Ophthalmic	... Open alternate weeks only.
	Thurs. ...	a.m.	...	Minor ailments	... Nurse only. Re-dressings.
	Fri. ...	a.m. & p.m.	...	Dental	
Burnley	... Thurs. ...	p.m.	...	Orthopædic	... Surgeon attends second Thursday in each month only.
Carnforth	... Mon. ...	a.m.	...	Minor ailments	... Open alternate weeks only.
		a.m. & p.m.	...	Dental	
	Thurs. ...	a.m.	...	Ophthalmic	... Open first Thursday in each month only.
	Fri. ...	a.m.	...	Minor ailments	... Nurse only. Re-dressings.
Chadderton	... Mon. ...	a.m. & p.m.	...	Orthopædic	... Nurse only.
	Fri. ...	p.m.	...	Orthopædic	... Surgeon attends third Friday in each month only.
Chorley (a)	... Mon. ...	a.m.	...	Minor ailments	... Nurse only. Re-dressings.
	Tues. ...	a.m. & p.m.	...	Dental	
	Wed. ...	a.m.	...	Ophthalmic	... Open alternate weeks only.
	Thurs. ...	a.m.	...	Minor ailments	
	Fri. ...	a.m. & p.m.	...	Dental	
Chorley (b)	... Mon. ...	{ 2—3 p.m. Boys 3—4 p.m. Girls }		Artificial light	
	Wed. ...				
	Fri. ...				

Township.	Days and Times of Opening.		Nature of work undertaken.	Remarks.
Crompton	... Mon. ...	a.m.	... Ophthalmic	... Open alternate weeks only.
		a.m. & p.m.	... Dental	
	Tues. ...	a.m.	... Minor ailments...	
	Thurs. ...	a.m. & p.m.	... Dental	
Dalton-in-Furness	Fri. ...	a.m.	... Minor ailments	... Nurse only. Re-dressings.
	... Mon. ...	a.m.	... Minor ailments...	
	Tues. ...	a.m. & p.m.	... Dental	
	Thurs. ...	a.m.	... Dental	
Darwen		a.m.	... Minor ailments	... Open alternate weeks only.
	Fri. ...	a.m.	... Ophthalmic	
	... Wed. ...	a.m. & p.m.	... Orthopædic	
			... Surgeon attends third Wednesday in each month only.	
Davyhulme	... Mon. ...	a.m.	... Minor ailments...	... Nurse only. Re-dressings.
	Tues. ...	a.m. & p.m.	... Dental	
		p.m.	... Ophthalmic	
	Thurs. ...	p.m.	... Minor ailments...	
Droylsden	Fri. ...	a.m. & p.m.	... Dental	... Open alternate weeks only.
	... Mon. ...	a.m.	... Minor ailments...	
		p.m.	... Dental	
	Wed. ...	p.m.	... Dental	
Earlestown	Thurs. ...	a.m.	... Minor ailments	... Nurse only. Re-dressings.
	... Mon. ...	a.m.	... Ophthalmic	
		a.m. & p.m.	... Dental	
	Tues. ...	a.m. & p.m.	... Dental	
Fleetwood	Wed. ...	a.m.	... Minor ailments...	... Nurse only. Re-dressings.
		a.m. & p.m.	... Dental	
	Fri. ...	a.m.	... Minor ailments	
	... Mon. ...	a.m. & p.m.	... Dental	
Great Crosby	Tues. ...	a.m. & p.m.	... Dental	... Surgeon attends third Friday in each month only.
	Thurs. ...	a.m.	... Orthopædic	
	Fri. ...	a.m.	... Ophthalmic	
			... Open alternate weeks only.	
Haydock Mon. ...	a.m.	... Minor ailments...	... Nurse only. Re-dressings.
	Tues. ...	a.m.	... Orthopædic	
			... Surgeon attends second Tuesday in each month only.	
	Wed. ...	a.m.	... Minor ailments	
Horwich	Thurs. ...	a.m.	... Ophthalmic	... Open alternate weeks only.
		a.m. & p.m.	... Dental	
	Fri. ...	a.m. & p.m.	... Dental	
	... Mon. ...	a.m.	... Minor ailments...	
Horwich		p.m.	... Dental	... Nurse only. Re-dressings.
	Tues. ...	a.m. & p.m.	... Dental	
		a.m.	... Artificial light	
	Wed. ...	a.m.	... Ophthalmic	
Horwich		a.m.	... Orthopædic	... Surgeon attends first Wednesday in each month only. Nurse attends first and fourth Wednesdays.
	Fri. ...	a.m.	... Minor ailments	
		p.m.	... Dental	
	Sat. ...	a.m.	... Artificial light	

Township.	Days and Times of Opening.		Nature of work undertaken.		Remarks.
Irlam ...	Mon. ...	a.m. & p.m.	... Dental		
	Tues. ...	a.m.	... Minor ailments		
	Wed. ...	a.m. & p.m.	... Dental		
	Thurs. ...	a.m.	... Ophthalmic	... Open alternate weeks only.	
		a.m. & p.m.	... Dental		
		p.m.	... Orthopædic	... Surgeon attends third Thursday in each month only.	
	Fri. ...	a.m.	... Minor ailments	... Nurse only.	Re-dressings.
Kearsley ...	Mon. ...	a.m.	... Ophthalmic		
		p.m.	... Minor ailments	... Nurse only.	Re-dressings.
	Tues. ...	a.m. & p.m.	... Dental		
		a.m.	... Orthopædic	... Nurse only.	
	Wed. ...	p.m.	... Orthopædic	... Surgeon attends first Wednesday in each month only.	
	Thurs. ...	a.m.	... Minor ailments		
	Fri. ...	a.m. & p.m.	... Dental		
Lancaster ...	Tues. ...	a.m.	... Orthopædic	... Surgeon attends third Tuesday, alternate months. Nurse attends alternate Tuesdays.	
	Thurs. ...	a.m.	... Ophthalmic	... Open by arrangement when sufficient number of cases for treatment, usually monthly. Day changed to Monday during summer months.	
Leyland ...	Mon. ...	a.m.	... Minor ailments	... Nurse only.	Re-dressings.
		p.m.	... Orthopædic	... Surgeon attends first Monday in each month only.	
	Tues. ...	a.m. & p.m.	... Dental		
	Wed. ...	a.m.	... Ophthalmic	... Second and fourth Wednesdays.	
	Thurs. ...	a.m.	... Minor ailments		
	Fri. ...	a.m. & p.m.	... Dental		
Litherland ...	Mon. ...	a.m. & p.m.	... Dental		
	Tues. ...	a.m.	... Minor ailments		
		p.m.	... Dental		
	Wed. ...	a.m. & p.m.	... Dental		
		a.m.	... Orthopædic	... Surgeon attends second Wednesday in each month only.	
	Thurs. ...	a.m.	... Ophthalmic		
		a.m.	... Orthopædic	... Nurse only.	
		p.m.	... Dental		
	Fri. ...	a.m.	... Minor ailments		
Littleborough ...	Mon. ...	a.m. & p.m.	... Dental		
	Tues. ...	a.m.	... Minor ailments	... Nurse only.	Re-dressings.
	Wed. ...	a.m.	... Ophthalmic	... Open alternate weeks only.	
	Thurs. ...	a.m.	... Minor ailments		
Milnrow ...	Tues. ...	a.m. & p.m.	... Dental		
		a.m.	... Minor ailments		
	Fri. ...	a.m.	... Minor ailments	... Nurse only.	Re-dressings.
Nelson ...	Fri. ...	p.m.	... Orthopædic	... Surgeon attends third Friday in each month only.	
Ormskirk (a) ...	Mon. ...	a.m.	... Minor ailments	... Open alternate weeks only. (Re-dressings by Hospital staff each day).	
	Fri. ...	a.m. & p.m.	... Dental		

Township.	Days and Times of Opening.			Nature of work undertaken.	Remarks.
Ormskirk (b)	... Tues. ...	p.m.	... Orthopædic	... Nurse only, except second Tuesday in each month.	
	Fri. ...	a.m.	... Orthopædic	... Surgeon attends first Friday in each month only.	
Orrell	... Tues. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.	
		a.m. & p.m.	... Dental		
	Wed. ...	a.m. & p.m.	... Dental		
	Thurs. ...	a.m.	... Minor ailments		
	Fri. ...	p.m.	... Ophthalmic	... Open alternate weeks only.	
Oswaldtwistle	... Mon. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.	
	Tues. ...	a.m.	... Ophthalmic	... Open alternate weeks only.	
	Wed. ...	a.m. & p.m.	... Dental		
	Thurs. ...	a.m.	... Minor ailments		
	Fri. ...	a.m. & p.m.	... Dental		
Padiham	... Mon. ...	a.m. & p.m.	... Dental		
	Tues. ...	a.m.	... Minor ailments		
	Wed. ...	a.m. & p.m.	... Dental		
		p.m.	... Ophthalmic	... Open every third week.	
	Thurs. ...	a.m. & p.m.	... Dental		
Prescot	Fri. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.	
	... Mon. ...	a.m. & p.m.	... Dental		
		a.m.	... Minor ailments...	Nurse only. Re-dressings.	
	Tues. ...	a.m. & p.m.	... Dental		
	Wed. ...	a.m. & p.m.	... Dental		
		p.m.	... Ophthalmic	... Open first and last Wednesday in each month only.	
	Thurs. ...	a.m.	... Minor ailments		
	a.m. & p.m.	... Dental			
Preston	Fri. ...	a.m. & p.m.	... Dental		
		a.m. & p.m.	... Orthopædic	... Surgeon attends first Friday (p.m.) in each month only. Nurse attends each Friday, except first Friday (p.m.).	
	... Wed. ...	a.m. & p.m.	... Orthopædic	... Surgeon attends fourth Wednesday in each month only.	
Ramsbottom	... Mon. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.	
	Tues. ...	a.m. & p.m.	... Dental		
	Wed. ...	a.m.	... Minor ailments		
	Fri. ...	a.m.	... Ophthalmic	... Open alternate weeks only.	
Rawtenstall		a.m. & p.m.	... Dental		
	... Wed. ...	a.m.	... Orthopædic	... Surgeon attends fourth Wednesday in each month only.	
Rishton	... Mon. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.	
		a.m. & p.m.	... Dental		
	Tues. ...	a.m.	... Ophthalmic	... Open alternate weeks only.	
		a.m. & p.m.	... Dental		
	Wed. ...	a.m. & p.m.	... Dental		
		p.m.	... Orthopædic	... Surgeon attends fourth Wednesday in each month only.	
	Thurs. ...	a.m. & p.m.	... Dental		
Rochdale	Fri. ...	a.m.	... Minor ailments		
	... Mon. ...	a.m.	... Orthopædic	... Surgeon attends each week.	
	Fri. ...	p.m.	... Ophthalmic	... Open alternate weeks only.	

Township	Days and Times of Opening.		Nature of work undertaken.	Remarks.
Royton ...	Tues. ...	a.m.	... Minor ailments	
	Wed. ...	a.m. & p.m.	... Dental	
		a.m.	... Ophthalmic	... Open alternate weeks only.
	Thurs. ...	a.m. & p.m.	... Dental	
Skelmersdale ...	Fri. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.
	Wed. ...	p.m.	... Inspection	
Tyldesley ...	Mon. ...	a.m. & p.m.	... Dental	
		p.m.	... Orthopædic	... Nurse only.
	Tues. ...	a.m.	... Minor ailments	
	Wed. ...	a.m. & p.m.	... Dental	
		a.m.	... Ophthalmic	... Open alternate weeks only.
		a.m.	... Orthopædic	... Surgeon attends second Wednesday in each month only.
	Thurs. ...	a.m. & p.m.	... Dental	
Ulverston ...		p.m.	... Minor ailments...	Nurse only. Re-dressings.
	Mon. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.
		a.m. & p.m.	... Dental	
	Tues. ...	p.m.	... Orthopædic	... Third Tuesday alternate months.
	Wed. ...	a.m.	... Minor ailments	
		a.m.	... Dental	
	Thurs. ...	a.m.	... Ophthalmic	... Open alternate weeks only.
Walkden ...		p.m.	... Dental	
		a.m. & p.m.	... Dental	
	Tues. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.
	Wed. ...	a.m. & p.m.	... Dental	
	Thurs. ...	a.m. & p.m.	... Dental	
	Fri. ...	a.m.	... Minor ailments	
Westhoughton ...	Mon. ...	a.m.	... Dental	
		a.m.	... Minor ailments	
	Tues. ...	p.m.	... Artificial light.	
	Wed. ...	a.m. & p.m.	... Dental	
		a.m.	... Ophthalmic	... Open every fourth Wednesday only.
		p.m.	... Minor ailments...	Nurse only. Re-dressings.
	Thurs. ...	a.m. & p.m.	... Dental	
Whitefield ...	Fri. ...	a.m.	... Dental	
		a.m.	... Artificial light	
	Mon. ...	a.m. & p.m.	... Dental	
	Tues. ...	p.m.	... Minor ailments	
	Wed. ...	a.m. & p.m.	... Dental	
	Thurs. ...	a.m. & p.m.	... Dental	
Whitworth ...		a.m.	... Orthopædic	... Surgeon attends third Thursday in each month only.
		a.m.	... Ophthalmic	... Open alternate weeks only.
	Fri. ...	p.m.	... Minor ailments...	Nurse only. Re-dressings.
	Mon. ...	a.m.	... Minor ailments	
Wigan ...	Thurs. ...	a.m.	... Minor ailments...	Nurse only. Re-dressings.
	Fri. ...	a.m. & p.m.	... Dental	
	Mon. ...	a.m.	... Orthopædic	... Surgeon attends first Monday in each month only.

Arrangements have been made with the following Hospitals for the treatment of specified classes of defect, that marked with an asterisk being a new arrangement made during the year :—

Ashton-under-Lyne Infirmary	Tonsils and adenoids, refractions, operative treatment of squint, X-ray treatment of ringworm.
Blackburn Royal Infirmary ...	Tonsils and adenoids, X-ray treatment of ringworm, refractions.
Bolton Infirmary ...	... Refractions, tonsils and adenoids, X-ray treatment of ringworm, operative treatment of squint.
Burnley Victoria Hospital ...	... Refractions, tonsils and adenoids, operative treatment of squint.
Bury Infirmary ...	... Tonsils and adenoids, refractions, operative treatment of squint, X-ray treatment of ringworm.
Colne Hartley Hospital ...	... Refractions, tonsils and adenoids, operative treatment of squint.
*Darwen Clinic ... (Secondary School cases)	... Refractions, teeth.
Davyhulme Park Hospital ...	Tonsils and adenoids.
Fleetwood Hospital ...	... Tonsils and adenoids.
Lancaster Royal Infirmary ...	Tonsils and adenoids.
Leigh Borough Clinic ...	Tonsils and adenoids.
Liverpool Eye and Ear Infirmary (Myrtle Street)	... Tonsils and adenoids, refractions, operative treatment of squint.
Liverpool St. Paul's Eye Hospital	... Operative treatment of squint.
Manchester Ancoats Hospital	*Aural cases (operative treatment), tonsils and adenoids, crippling defects.
*Morecambe Clinic ... (Secondary School cases)	... Refractions, teeth.
Oldham Royal Infirmary ...	... Refractions, operative treatment of squint, X-ray treatment of ringworm, tonsils and adenoids.
Ormskirk General Hospital ...	... Tonsils and adenoids, refractions, *eye operations, *crippling defects (under 5 years).
Preston Royal Infirmary ...	... Tonsils and adenoids, X-ray treatment of ringworm, refractions, operative treatment of squint.
Ramsbottom Cottage Hospital	... Tonsils and adenoids.
*Rawtenstall Clinic ...	... Minor ailments, teeth, refractions.
St. Helens Peasley Cross Hospital	... Refractions, operative treatment of squint, tonsils and adenoids.
*Southport Infirmary (Pilkington Road)	... Tonsils and adenoids.
*Stretford Clinic ... (Secondary School cases)	... Tonsils and adenoids, refractions, aural treatment, teeth.
Ulverston Cottage Hospital ...	Tonsils and adenoids.
Warrington Infirmary ...	... Tonsils and adenoids, refractions, operative treatment of squint.
Whiston Infirmary ...	... Operative treatment of squint.
Widnes Accident Hospital ...	Tonsils and adenoids.
Wigan Royal Infirmary ...	Tonsils and adenoids.
Wigan Tower Buildings ...	Refractions.

The following statement shows the number of individual children who received treatment under the Hospital Scheme of the Lancashire County Council during the twelve months ended 31st December, 1931 :—

Disease or Defect.				Elementary.	Secondary.	Child Welfare.	Total.
Enlarged Tonsils and Adenoids	...	...	...	2,165	24	93	2,282
Defective Vision	...	...	...	645	42	8	695
Squint	...	...	...	29	1	...	30
Aural	...	...	...	5	2	...	7
Ringworm	...	...	...	6	...	...	6
Teeth	...	...	...	...	5	...	5

The following table shows the number of cases treated at each Hospital or Infirmary with which the Lancashire County Council has made arrangements :—

Hospital, Infirmary, or Treatment Centre.	Tonsils and Adenoids.			Defective Vision.			Squint.			Aural.			Ringworm.			Teeth.		
	E.	S.	C.W.	E.	S.	C.W.	E.	S.	C.W.	E.	S.	C.W.	E.	S.	C.W.	E.	S.	C.W.
Ancoats	45	...	6	10	...	...	1	...	...	...	...	...	...	...	...
Ashton-under-Lyne	122	5	12	35	3	...	...	...	...	...	...	...	...	...	...
Blackburn	94	...	2	29	5	...	...	...	...	...	...	...	...	...	...
Bolton	467	3	9	...	3	...	...	...	...	...	...	...	...	...	...
Burnley	12	...	1	90	...	1	...	...	...	...	...	...	...	...	...
Bury	13	...	1	...	5	...	...	...	...	...	...	...	...	...	...
Colne	2	...	...	16	...	...	...	...	...	...	...	...	...	...	...
Davyhulme	184	1	4	...	...	...	...	...	...	...	...	...	...	...	...
Fleetwood	165	2	23	...	...	...	...	...	...	...	...	...	...	...	...
Lancaster	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Leigh	76	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Liverpool Eye and Ear	98	2	1	...	...	...	...	...	...	...	...	...	...	...	...
Liverpool St. Paul's	10	...	...	...	...	...	...	...	...	...
Oldham	49	...	...	20	...	1	...	...	...	...	...	...	...	...	...
Ormskirk	100	2	4	114	8	1	...	...	...	...	...	...	...	...	...
Preston	216	4	12	160	5	3	4	...	...	4	...	...	6	...	...
Ramsbottom	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Southport	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Helens	309	3	10	7	...	2	3	...	...	...	...	...	...	...	...
Stretford	12	...	...	...	...	2	...	...	...	...	5	...
Ulverston	68	...	6	...	...	...	...	...	...	...	...	...	...	...	...
Warrington	65	...	...	17	6	...	...	...	...	...	...	...	...	...	...
Whiston	11	1	...	...	...	...	...	...	...	...
Widnes	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wigan	52	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Dr. Bywater	91	...	1	...	...	...	...	...	...	...	...	...
Dr. Holmes	44	7	...	...	...	...	...	...	...	...	...	...
Total	2165	24	93	645	42	8	29	1	...	5	2	...	6	...	...

MINOR AILMENTS.

These include such defects as running ears, external eye disease, skin diseases, etc., and treatment for them is available for approximately 90,000 children. The number of individual children who received treatment during the year was 10,504.

TONSILS AND ADENOIDS.

Arrangements are now in force with the following Hospitals and Clinic for the operative treatment of Tonsils and Adenoids :—Ancoats Hospital, Manchester ; Ashton-under-Lyne Infirmary ; Blackburn Royal Infirmary ; Bolton Infirmary ; Burnley Victoria Hospital ; Bury Infirmary ; Davyhulme Park Hospital ; Fleetwood Hospital ; Hartley Hospital, Colne ; Lancaster Royal Infirmary ; Leigh Borough Clinic ; Myrtle Street Hospital, Liverpool ; Oldham Royal Infirmary ; Ormskirk Cottage Hospital ; Peasley Cross Hospital, St. Helens ; Preston Royal Infirmary ; Ramsbottom Cottage Hospital ; Southport Infirmary ; Ulverston Cottage Hospital ; Warrington Infirmary ; Widnes Accident Hospital ; Wigan Royal Infirmary.

During the year the number of Elementary School children who received operative treatment for this condition was 2,302, of whom 2,165 were treated under the Committee's scheme.

TUBERCULOSIS.

The treatment of tuberculous school children is in the hands of the Tuberculosis Committee of the Lancashire County Council, and all cases for treatment are referred to the Tuberculosis Officer for the area concerned.

VISION.

The treatment of defects of vision is undertaken either in the Eye Departments of General Hospitals or in the Eye Departments of the Committee's own Clinics. In the former case it is undertaken by the Specialist Staff of the Hospital; in the latter case by part-time Visiting Specialists. Arrangements have been made with the following Hospitals:—Ashton-under-Lyne; Blackburn; Bolton; Burnley; Bury; Colne; Oldham; Ormskirk; Preston; St. Helens; Warrington; Whiston; Liverpool, Myrtle Street Eye and Ear; and St. Paul's Eye; also at Rawtenstall Borough Clinic.

Visiting Specialists attend the School Clinics in Ashton-in-Makerfield, Audenshaw, Carnforth, Chorley, Crompton, Dalton-in-Furness, Davyhulme, Earlestown, Fleetwood, Haydock, Horwich, Irlam, Kearsley, Lancaster, Leyland, Litherland, Littleborough, Oswaldtwistle, Padiham, Prescott, Rishton, Rochdale, Royton, Ramsbottom, Tyldesley, Ulverston, Walkden, Westhoughton, Whitefield and Wigan.

The number of children for whom Specialist eye treatment is available is approximately 121,000. The number of Elementary School children who received treatment for defective vision or squint was 5,692, of whom 5,415 were dealt with under the Committee's scheme.

Arrangements have also been made with certain firms of opticians, in connection with each Ophthalmic Clinic or Hospital, to supply spectacles at a fixed low charge. In necessitous cases the charge is reduced or remitted altogether. The number of children who either purchased glasses or received free spectacles under this scheme was 3,707.

In one area a local charity has arranged for the treatment of visual defect in Elementary School children, and provides spectacles free of charge to every child requiring them.

DENTAL DEFECTS.

The dental staff now consists of fifteen full-time and one part-time dental surgeons; each assisted by a nurse or dental attendant. Dental Clinics have been established in Ashton-in-Makerfield, Atherton, Audenshaw, Carnforth, Chorley, Crompton, Dalton-in-Furness, Davyhulme, Droylsden, Earlestown, Fleetwood, Great Crosby, Haydock, Horwich, Irlam, Kearsley, Leyland, Litherland, Littleborough, Milnrow, Ormskirk, Oswaldtwistle, Padiham, Prescott, Ramsbottom, Rishton, Royton, Tyldesley, Ulverston, Walkden, Westhoughton, Whitefield, and, Whitworth.

These Clinics serve schools with an average attendance of approximately 75,000 children. The number of children who received treatment during the year was 26,371.

As it is impossible, owing to the large number requiring treatment, to attend to all children, the energies of the dentists are concentrated on the younger groups of children during the eruption of the first permanent teeth.

Apart from this routine work, the dentists treat the following classes:—

- (a) Expectant and Nursing Mothers, on the recommendation of the Medical Officers;
- (b) Children under school age, similarly;
- (c) Casuals.

Casuals are of three classes:—

- (a) Urgent cases, e.g., toothache, dental abscess;
- (b) Cases where the mouth has to be put into a clean condition previous to operation for tonsils and adenoids;
- (c) Cases in which the Medical Officer requests that dental treatment should be given for some other medical reason.

ARTIFICIAL LIGHT TREATMENT.

Clinics have been established at Ashton-under-Lyne, Atherton, Chorley, Horwich, and Westhoughton for the treatment by artificial light of certain children in sub-normal health, and during the year 225 children received this form of treatment, making 5,521 attendances.

Ashton-under-Lyne Artificial Light Clinic.

DR. J. G. WILSON summarises in the following table the treatment of 11 cases at the Ashton-under-Lyne Artificial Light Clinic:—

In- itals.	Age.	Sex.	Physical Condition prior to Treatment.	Type of Lamp.	Body Surface Exposed.	Parents' Statements.	Total period of Treat- ment.	Average Dose per Treatment.	Total Dosage.	Other treatment at same time.	Result or Remarks.
E.B.	7	M.	Malnutrition	...	...	Better in every way. Appetite improved. More vitality.	Months. 5	11 mins.	322 mins.	None	General condition improved. Looks better. Gained 3-lb. Weight had been stationary for 9 months before commencement of treatment
H.C.	10	M.	"	...	...	Has lost former night sweats and cough	9	9-5 mins.	636 mins.	"	No gain in weight. General appearance definitely improved.
W.S.	13	M.	Debility	...	...	None	4	9 mins.	274 mins.	"	Much improved. Gained 1½ lbs.
R.S.	7½	M.	Malnutrition	...	...	"	5	12 mins.	366 mins.	"	Still stunted stature. General condition good. Gained 1 lb.
E.C.	12	M.	Malnutrition Suspected Nervous Disease	...	...	"	3	18 mins.	495 mins.	Dietetic	Gained 13 ounces. Much improved. Motions normal on full diet.
L.R.	8	M.	Malnutrition	...	...	"	8	16 mins.	840 mins.	None	No improvement in appearance. Gained 2 lbs. 4 oz.
J.S.	11½	M.	"	...	...	Frequent ill-health during last two years	6	19 mins.	870 mins.	"	No improvement. No gain in weight.
M.M.	7½	F.	Chorea	...	...	None	3	10 mins.	120 mins.	"	Recovery.
W.B.	2½	F.	Rickets	...	...	Appetite improving	4	11 mins.	266 mins.	"	Now walks. No gain in weight.
W.J.C.	9	M.	Chronic Otitis Media (bilateral). Began at age 3 years	...	...	General condition improved	4	10 mins.	420 mins.	"	No gain in weight. L. otorrhoea ceased. R. otorrhoea diminished to slight occasional discharge. Discontinued treatment.
M.R.	8	F.	Malnutrition	...	...	Less easily fatigued and eats better	5	20 mins.	810 mins.	"	Much improved. Marked gain in height. Gained 1 lb.

During the year 1931, the number of children from this area who completed a course of "Sunray" treatment was 11. Those still undergoing treatment are not included. They will be considered in next year's Report.

Of the 11 cases :—

- 7 were treated for Malnutrition.
- 1 was treated for Debility.
- 1 was treated for Chronic Otitis Media (bilateral).
- 1 was treated for Chorea.
- 1 was treated for Rickets.

The child suffering from Rickets discontinued treatment before full benefit could be obtained. During the period it was under treatment, it learned to walk—but this may have been coincidence. There was no general abatement of the signs and symptoms of Rickets.

The relief of Chorea confirms experience of previous years that Chorea is benefited by "Sunray" and that in the milder cases so treated the usual rest in bed may be dispensed with.

The child with Chronic Otitis Media experienced, under "Sunray" treatment, his first lasting cessation of profuse otorrhoea since the age of 3 years. Whether this is permanent or not remains to be seen.

Of the 7 cases of Malnutrition, 5 showed general improvement (*i.e.*, 74 per cent.), and the same number gained weight. One gained as much as 2 lbs. 4 ozs. without presenting any better appearance. One gained only $\frac{1}{2}$ lb., but he had not made any gain at all for the nine months previously. One did not appear to derive any benefit at all from 6 months' treatment comprising a total dosage of 870 minutes, but his home conditions and diet were notoriously bad.

Conclusions.

No scientific conclusions can be drawn from a study of such a small number of cases, but careful observation of individual children leads to the following opinions:—

- (1) Most sufferers from Malnutrition are benefited by "Sunray" treatment. No striking gain in weight must be expected, but rather an increased vitality, an improvement of appetite and resilience, quicker movements, a more alert appearance.
- (2) Mild degrees of Chorea may be cured by "Sunray" without recourse to the drastic "absolute rest in bed."
- (3) The increased vitality derived from general exposure to "Sunray" assists the child to throw off chronic infections such as Chronic Otitis Media.

Atherton and Westhoughton Artificial Sunlight Clinics.

DR. LEIGH reports as follows :—

(i.) (a)	Atherton and Tyldesley children of school age.						Total
	number treated	...	...	...	...	...	36
							(27 Atherton, 9 Tyldesley)
	Summary :—						
	Rickets	...	...	...	...	...	4
	Chronic Eczema	...	...	...	...	...	4
	Anæmia and Debility	...	...	...	...	...	3
	Catarrhal	...	...	...	...	...	10
	Malnutrition	...	...	...	...	...	4
	Alopecia	...	...	...	...	...	1
	Adenitis (cervical)	...	...	...	...	...	8
	Furunculosis	...	...	...	...	...	1
	Hypo-Thyroidism	...	...	...	...	...	1
(b)	Westhoughton children of school age.						Total number treated ...
							14
	Summary :—						
	Malnutrition	...	...	...	...	...	6
	Furunculosis	...	...	...	...	...	2
	Adenitis (cervical)	...	...	...	...	...	3
	Rickets	...	...	...	...	...	3

(ii.) Type of lamp used : Quartz Mercury Vapour.

(a) Average period of treatment	...	...	...	14 weeks
Maximum period of treatment	...	...	...	10 months
Minimum period of treatment	...	...	...	6 weeks.
(b) Average number of doses	...	...	...	25
Maximum number of doses	...	...	...	81
Minimum number of doses	...	...	...	11
(c) Strength of doses : Varies from 2 to 15 minutes at distance of three feet.				

(iii.) Except four cases in receipt of Cod Liver Oil, treatment was by Artificial Light alone.

(iv.) As in previous years, progressive improvement has been marked in most cases. The treatment appears to promote in the children a sense of brightness and well-being. Mothers who accompany the children state that changes have been noted as regards easier management at home.

(v.) Improvement noted in general health condition. Bronchitic and catarrhal conditions improved. Apart from two cases with abscess formation, all the cases of Adenitis progressed to recovery.

(vi.) In no case has unfavourable symptoms been observed.

(vii.) As will be gathered from above, most of the children of school age appear to have derived distinct benefit from the treatment.

Atherton children of pre-school age :

Total number treated	...	...	...	...	45
Average number of doses per case	...	...	...	...	26

Summary :

Rickets	...	...	...	...	28
Ichthyosis	...	...	...	...	1
Catarrhal conditions	...	...	...	...	9
General debility...	...	...	...	...	6
Adenitis	...	...	...	...	1

Without exception the treatment has been successful. This particularly applies to the cases of rickets.

This improvement is strikingly noticeable, and is confirmed by the statements of mothers as to their experience at home, regarding health and temperament.

The physical signs of rickets disappear, and no doubt remains as to the value of this Clinic in connection with Child Welfare work.

Chorley Artificial Light Clinic.

DR. G. G. JOHNSTONE reports as follows on the five cases referred by him for treatment at the above Clinic :—

The results of treatment are, on the whole, rather disappointing. Two of the five cases were handed over to the Tuberculosis Officers. The other three cases improved during the summer, so that it would be rash to presume that the improvement was entirely attributable to the attendance at the Clinic.

The value of this treatment increases during the darker months of the year, and this is therefore the time when the waiting list is longest, owing to insufficient accommodation.

It would be of great advantage if special sessions could be given to County cases, or, as an alternative, if a certain number of places could be reserved for them.

At present, owing to pressure of accommodation, some cases are necessarily kept waiting for weeks, and at the end of this period Ultra Violet treatment may be neither suitable nor desirable.

Case 1.—Boy born 18/8/24 :

Glands in the neck and generally poor condition. Treatment continued from 1930. The improvement continued, weight increased satisfactorily and the child was discharged apparently quite well, except that the small glands could still be felt.

Case 2.—Girl born 11/7/21 :

Enlarged glands both sides of the neck, especially the left side. The treatment was continued from 1930, and progress was satisfactory. The weight increased and the patient was discharged in a much improved condition.

Case 3.—Boy born 5/6/23 :

Old standing enlarged glands in the neck, especially the left side. Treatment continued from 1930, and satisfactory progress was maintained. The glands decreased in size and the general condition of the child improved. He was discharged during the summer much improved.

Case 4.—Boy born 31/10/26 :

Poor physique. The glands in the left side of his neck enlarged six weeks before treatment began and have not receded. After fourteen doses of treatment this case was transferred to the County Tuberculosis staff for supervision and operative treatment, if necessary, the glands having increased in size.

Case 5.—Girl born 21/8/22 :

The glands in the neck were enlarged, and treatment was continued from 1930. In November, 1930, tonsillectomy was done, but she had another attack of tonsillitis in January. During the summer the child's health improved, and the glands decreased in size, but towards the end of the year she had influenza, after which the glands increased, and the diagnosis of tuberculosis became unmistakable. This was confirmed by the Tuberculosis Officer, to whom the case was transferred for operative treatment. This child attended for treatment at Chorley on 135 sessions during 1930 and 1931.

DR. G. G. WRAY sends the following observations on the ten cases he referred to the Chorley Clinic :—

Five of cases were referred for various chest conditions of which four showed very marked improvement owing to receiving treatment, and the other one showed slight improvement only.

Four cases were referred for rickets, one of whom was afterwards admitted to Rochdale. One showed a great improvement and two cases have not yet reported for inspection after the completion of their course of treatment.

One case was sent for suspected abdominal glands, and is still under treatment, but exhibits very great improvement.

Four cases were sent from the welfare centres—three for rickets and one for malnutrition. These have all shown marked improvement under treatment.

Horwich Artificial Light Clinic.

During the year 1931 DR. J. R. JAGGER referred thirty-four children of school age for treatment at the Horwich Ultra Violet Ray Clinic. The diseases treated and the results obtained are given in the following table :—

SUMMARY OF CASES TREATED AT THE HORWICH ARTIFICIAL LIGHT CLINIC DURING 1931.

Case.	Sex.	Age	Complexion.		Disease or Defect.	Duration, Dosage and Type of Irradiation.				Other Treatments.	Observations.	Weight.	
			Hair.	Eyes.		Mercury Lamp.	Carbon Arc.	Dosage.					
								Body Surface.	Mins.				Frequency.
A.B.	M.	12	Brown	Blue	Rheumatic Synovitis. Post Rheumatic Fever	+	...	Back & front	2m.	Twice weekly for 5 weeks	Salicylates	Synovitis and pain in joints decreased. Child brighter	Gain 6 oz.
A.A.	F.	6	Fair	Blue	Post Operative Tonsils. Cervical Adenitis	+	+	B. & f. and local	1m. each	Twice weekly 2 weeks	None ...	Bronchitis supervened. Treatment discontinued. Raised temperature	Loss 8 oz.
A.J.	M.	13	Fair	Blue	Furunculosis. Constipation	...	+	B. & f.	7m.	Twice weekly, 9 weeks	Dietetic	Skin cleared. Child more active and happy	Gain 2½ lbs.
A.J.	F.	9	Dark	Brown	Anaemia ...	...	+	B. & f.	6m.	Twice weekly, 43 weeks	None ...	Mucous Membranes better colour, but not much result after a year's treatment	Gain 3 lbs.
A.J.	M.	7	Ginger	Blue	Post Empyema. Otitis Media R.	...	+	B. & f.	3-7m.	Twice weekly, 4 weeks	For Ear	Child had been at a standstill. Both treatments initiated natural machinery of recovery	Gain 1 lb.
B.L.	M.	7	Fair	Blue	Anaemia. Corneal Ulcer	...	+	B. & f.	2-6m.	Twice weekly, 6 weeks	For Eye	Ulcer healed. General condition improved	Gain 3 lbs.
B.J.	F.	8	Fair	Blue	Anaemia. Enlarged Cervical Glands	...	+	B. & f.	2-7m.	Twice weekly, 29 weeks	Cod Liver Oil	Blood condition improved. Glands smaller	Gain 2 lbs.
C.O.	F.	10	Fair	Brown	Lichen Planus ...	...	...	B. & f. and local	10m.	Twice weekly, 10 weeks	Lin. Salicyl ...	Cured...	Gain 8 oz.
C.F.	F.	8	Dark	Dark	Anaemia. Constipation ...	...	+	B. & f.	1½-2m.	Twice weekly, 23 weeks	Dietetic	No change ...	—
C.V.	M.	11	Fair	Blue	Lupus ...	...	+	B. & f. and local	3½m.	Twice weekly, 43 weeks	None ...	Improved. Condition varies	Gain 1 lb.
D.A.	F.	9	Fair	Blue	Anaemia. Suspected Abdominal Tuberculosis	...	+	B. & f.	6m.	Twice weekly, 5 weeks	Dietetic. Cod Liver Oil	No change ...	—
F.F.F.E.	F.	7	Dark	Blue	Asthma ...	...	...	B. & f.	3m.	Twice weekly, 5½ weeks	None ...	Cough increased. Asthmatic attacks more frequent and severe. Discontinued treatment	Loss 2 lbs.
G.D.M.	F.	6	Fair	Hazel	Rickets ...	...	+	B. & f.	7m.	Twice weekly, 15 weeks	Cod Liver Oil Splints (night)	Still under treatment and practically cured	Gain 1 lb.
G.W.	M.	5	Fair	Grey	Debility following Measles. Tumescence Abdomen	...	+	B. & f.	6m.	Twice weekly, 9 weeks	Cod Liver Oil	Child more active. Muscle tone improved	Gain 1 lb.
H.H.	M.	5	Red	Grey	Post Operative Tonsillectomy ...	...	...	B. & f.	1½-2m.	Twice weekly, 20 weeks	Cod Liver Oil	General improvement in health	Gain 1½ lbs.
H.M.	F.	10	Brown	Grey	Gastric Catarrh ...	...	+	B. & f.	6m.	Twice weekly, 40 weeks	None ...	No change ...	Loss 1 lb.
L.W.R.	M.	5	Fair	Brown	Teno synovitis. Rheumatic History ...	...	+	B. & f.	6m.	Twice weekly, 20 weeks	None ...	General condition improved	Gain 1 lb.

Case.	Sex.	Age	Complexion.		Disease or Defect.	Duration, Dosage and Type of Irradiation.				Other Treatments.	Observations.	Weight.			
			Hair.	Eyes.		Mercury Lamp.	Carbon Arc.	Dosage.							
								Body Surface.	Frequency.						
McG. R.	M.	6	Fair	Grey	Cervical Adenitis	...	...	+	+	B. & f. and local	6m. & 4m.	Twice weekly, 26 weeks	Cod Liver Oil	Glands much reduced. Muscle tone and appetite increased	Gain 4 lbs.
M.J.	M.	6	Fair	Brown	Anæmia. Delicacy	...	...	+	...	B. & f.	2m.	Twice weekly, 1 week	None ...	Rise of temperature. U.V.R. discontinued	Loss 12 oz.
M.D.	M.	7	Dark	Brown	Eczema, rt. leg	...	...	+	...	Local	½-1m.	Twice weekly, 5 weeks	None ...	Cured	Gain 4 oz.
M.D.	F.	7	Fair	Grey	Post Operative Tonsillectomy	...	...	...	...	B. & f.	7m.	Twice weekly, 24 weeks	None ...	Improved muscle tone and appetite	Gain 4 lbs.
J.D.	F.	6	Fair	Grey	Anæmia. Constipation	...	...	...	...	B. & f.	6m.	Twice weekly, 14 weeks	None ...	No apparent change	Loss 4 oz.
P.A.	F.	8	Fair	Blue	Cervical Adenitis (Tubercular)	...	...	+	+	B. & f. and local	1-7m.	Twice weekly, 12 weeks	None ...	Initial gain in wt. and subsidence of glands. Later glands increased in size and wt. decreased	Loss 2 lbs.
R.F.	M.	5	Fair	Grey	Eczema Legs	...	...	+	...	Local	1-2m.	Twice weekly, 8 weeks	None ...	Cured	Gain 1 lb.
S.J.	M.	10	Fair	Blue	Anæmia. Malnutrition	...	...	...	+	B. & f.	4m.	Twice weekly, 32 weeks	Cod Liver Oil	Anæmia less	Gain 3 lbs.
S.M.	F.	8	Dark	Dark	Enlarged Cervical Glands. Malnutrition	...	...	+	+	B. & f. and local	½-4m.	Twice weekly, 33 weeks	Cod Liver Oil	Glands subsided. General condition improved	Gain 2 lbs.
S.H.	M.	5	Dark	Brown	Enlarged Bronchial Glands. Asthma	...	...	...	+	B. & f.	5m.	Twice weekly, 21 weeks	Cod Liver Oil	Health improved	Gain 2 lbs.
S.L.	M.	10	Fair	Brown	Nasal Catarrh (Ch.). Malnutrition	...	...	...	+	B. & f.	7m.	Twice weekly, 3 weeks	Cod Liver Oil	Catarrh cleared. Muscle tone improved...	Gain 3 lbs.
T.J.	M.	12	Fair	Brown	Lupus, Legs	...	...	+	+	B. & f. and local	1-7m.	Twice weekly, 25 weeks	None ...	Lupus cured	Gain 4 lbs.
T.M.	F.	9	Fair	Brown	Rheumatism	...	...	...	+	B. & f.	5m.	Twice weekly, 3½ weeks	Salicylates	Induced bronchitis. Loss of weight and night temperatures	Loss 2½ lbs.
V.R.	M.	6	Ginger	Brown	Anæmia. Malnutrition	...	...	...	+	B. & f.	6m.	Twice weekly, 3 weeks	Cod Liver Oil	Slight improvement in activity. Fatigue less	Gain 4 oz.
W.E.	F.	11	Dark	Dark	Articular Rheumatism	...	...	...	+	B. & f.	7m.	Twice weekly, 18½ weeks	Lin. Salicyl.	Much improved. Joint pains disappeared	Gain 1 lb.
W.F.	M.	7	Fair	Grey	Post Pneumonic Debility	...	...	+	...	B. & f.	2m.	Twice weekly, 24½ weeks	Cod Liver Oil	Activity and appetite improved	Gain 4 lbs.
W.A.	F.	6	Fair	Blue	Ulcer, Leg	...	...	+	...	B. & f. and local	2m.	Twice weekly, 1 week	None ...	Raised temperature to 101° F. Induced bronchitis. U.V.R. discontinued	—

Reviewing the list one sees that of the four Rheumatic cases treated, three showed substantial improvement, whilst in one a reduction in weight and rise of temperature was induced. Of the three Post operative Tonsillar cases, two gained considerably, but treatment was discontinued in the third because of the occurrence of bronchitis. Four out of six cases of Enlarged Glands showed marked reduction of the glands. In the other two cases of glandular enlargement, one broke down after an initial improvement, and treatment in the other case was discontinued on account of loss of weight and induced bronchitis. In the nine cases of Anæmia and Malnutrition only two failed to show substantial improvement. Six cases of Skin Disease resulted in five cures and one improved case. The Asthmatic cases do not usually react favourably to Ultra Violet Ray, but one of the two cases was improved and the other was made worse. Contrary to expectations, the Post Empyema and Post Pneumonia cases, both showed marked improvement. There was only one case of acute Rickets treated. This small number is, of course, to be expected amongst children of school age, where there is ample opportunity for anti-rachitic treatment in the pre-school period.

The average period of treatment by the Ultra Violet Ray has been $14\frac{1}{2}$ weeks, and the number of treatments 29. For the most part other treatments have been administered along with the Ultra Violet Ray, but in a few cases, for experimental purposes, other medication has been ignored.

Ultra Violet Ray medication appears to have a definite place in the treatment of the school child of the present age, but its sphere of usefulness and efficiency is not nearly so marked nor so wide, however, as in the earlier years of life. Both from the standpoint of preventive medicine and economy, its wider use, in ante-natal work and in connection with the Child Welfare Centres, would obviate much of the need for its use in school children. In the very early stages of life there is imminent risk of vitamin deficiency and more urgent need for sunlight, real or artificial.

Excluding the skin cases, other methods of treatment, coupled with irradiated ergosterol, and administered to a similar series of parallel cases as those in the Table, have resulted in as favourable (if not more favourable) results. The period of such treatment has been shorter and the cost considerably less. However, one must not lose sight of the fact that there are some cases which fail to react to oral medication, but respond to light treatment. On the other hand Ultra Violet Ray medication has its failures and gives precedence to other measures. Its failures have found expression in a lessened demand by parents for treatment by it, and the growth of a doubt as to its efficacy.

ACCIDENTS TO SCHOOL CHILDREN.

During the year 331 accidents to children in school were reported. This compares with 339, 311, 364 and 258 for the previous four years.

The following first-aid materials are provided on the Schedule of School Supplies:—

- Gauze Bandages, 1 in. in lengths of 6 yards.
- Gauze Bandages, 2 in. in lengths of 6 yards.
- Boric Lint in rolls of 2 oz.
- Cotton Wool in cartons of 4 oz.
- Adhesive Plaster on $\frac{1}{2}$ -in. spools, $2\frac{1}{2}$ yards long.

CRIPPLING DEFECTS.

The arrangements for dealing with crippled children were fully described in the Annual Report for 1927. Since the publication of the report for 1930 the scheme has been further increased by the inclusion of the following Authority:—The Borough of Darwen.

The following table shows the number of children treated during 1931:—

	Ancoats Hospital.	Biddulph Hospital.	Ethel Hedley Hospital.	Rochdale Crippled Children's Home.	Myrtle Street Hospital.	Heswall Country Hospital.
In-patients, 1st Jan. 1931	...	87	14	14	11	16
Admitted during the year	2	140	36	27	47	41
Discharged during the year	1	142	37	27	56	43
Remaining on 31st Dec., 1931	1	85	13	14	2	14

AFTER CARE CENTRES.

The following is a summary of the work done during the year in the After Care Centres :—

No. of individual children who attended	3,061
Total number of attendances made	15,129
No. of children referred to Consultant Orthopaedic Surgeon at Hospitals (Ancoats or Myrtle Street)	213
No. of children recommended for operative treatment by Orthopaedic Surgeons at Centre or Hospital	310
No. of Plasters made at Centres	181
No. of Surgical Appliances, <i>e.g.</i> , boots, irons, etc., supplied through Centres	1,038
No. of children given remedial exercises	846
No. of children for whom treatment has been refused by parents or guardians	61

The following table shows the defects from which the children seen in the After-Care Centres were suffering :—

Paralysis—

(a) Infantile—Upper Limb	28
Lower Limb	238
Upper and Lower Limb	11
(b) Spastic—Monoplegia	19
Diplegia	14
Paraplegia	77
Hemiplegia	119
Facial Palsy	2
(c) Birth Palsy	69
Pseudo Hypertrophic Muscular Dystrophy	4
Peroneal Dystrophy	1

Deformities, Congenital—

Hydrocephalus	4
Scoliosis	19
Sprengel's Shoulder	12
Rudimentary and Malformed Limbs	27
Talipes Equino Varus	122
Talipes Equino Valgus	32
Pes Calcaneus	15
Cervical Rib	1
Torticollis	89
Torticollis, Spasmodic	6
Spina Bifida	17
Spina Bifida with Club Foot	6
Achondroplasia	2
Metatarsus Varus	30
Absence of Bones	1
Club Hand	1
Dislocation of Hip	56
Subluxation of Hip	2
Subluxation of Knee	1
Contractions	22
Syndactylism	7
Wedge Vertebrae	6
Adduction Fifth Toe	6
Supernumerary Digits	2
Other Deformities	28

Deformities, Traumatic—

Fractures of Upper and Lower Limbs	95
Subluxations	3
Dislocations	4
Displaced Epiphysis	4
Contusions	9
Tendons	4
Amputations	6
Sprains	7
Intra Uterine Amputation of Hand	4
Intra Uterine Amputation of Hand and Foot	2
Coxa Vara	4
Nerve Injuries	9
Other Deformities	17

Deformities, Other—

Pronated Feet	99
Pes Cavus	31
Pes Varus	11
Pes Planus	125
Claw Feet	15
Hallux Valgus	9
Scoliosis	155
Kyphosis	79
Pigeon Chest	3
Hallux Rigidus	5
Lordosis	4
Synostosis Radius and Ulna	4
Pseudo Coxalgia	28
Hammer Toes	20
Birth Fractures	3
Miscellaneous	20

Rickets—

Genu Varum	297
Genu Valgum	351
Genu Valgum and Coxa Vara	7
Genu Varum and Coxa Vara	5
Generalised	52
Acute	15
Renal	2
Delayed (Dwarf)	3

Inflammations—				Tumours—			
Arthritis ... ..	...	...	22	Lymphatic Hygroma ... ..	...	...	1
Arthritis, Suppurative ... ..	...	...	10	Exostosis—Multiple ... ..	...	...	5
Arthritis, Infective ... ..	...	...	9	Lower Limb ... ..	...	...	3
Periostitis and Osteitis ... ..	...	...	8	Naevus ... ..	...	...	1
Synovitis ... ..	...	...	32	Ganglion ... ..	...	...	6
Bursitis ... ..	...	...	11	Chondroma ... ..	...	...	1
Epiphysitis ... ..	...	...	1	Fibroma ... ..	...	...	1
Pyæmia ... ..	...	...	1	Lipoma ... ..	...	...	2
Schlatter's Disease ... ..	...	...	10	Cyst ... ..	...	...	16
Osteomyelitis ... ..	...	...	23	Unclassified ... ..	...	...	4
Other ... ..	...	...	14	Nervous Diseases—			
Tuberculosis—				Mental Deficiency ... ..	...	...	17
Active—Knee ... ..	...	...	3	Encephalitis Lethargica ... ..	...	...	2
Hip ... ..	...	...	1	Polio Encephalitis ... ..	...	...	9
Spine ... ..	...	...	5	Other Medical Neuroses ... ..	...	...	9
Sacro-Iliac ... ..	...	...	2	Miscellaneous—			
Ankle ... ..	...	...	2	Köhler's Disease ... ..	...	...	5
Old—Knee ... ..	...	...	17	General Muscular Hypotonia ... ..	...	...	2
Spine ... ..	...	...	17	Hemihypertrophy ... ..	...	...	3
Hip ... ..	...	...	16	Empyema ... ..	...	...	4
Elbow ... ..	...	...	2	Malnutrition ... ..	...	...	1
Ankle ... ..	...	...	2	Unclassified ... ..	...	...	152
Multiple ... ..	...	...	1				
Sinus ... ..	...	...	1				

The following table shows the number and character of the operations performed at the Committee's Hospital at Biddulph during the year ended 31st December, 1931 :—

						No. of Operations.	
<i>Infantile Paralysis</i>	...	Claw Foot	...	...	...	2	
		Stabilisation of Foot	...	...	...	5	
		Wrench	...	...	...	2	
						—	9
<i>Spastic Paralysis</i>	...	Sciatic Neurotomy	...	...	...	1	
		Obturator Neurotomy	...	...	...	1	
		Division of Hamstrings	...	...	...	1	
		Elongation of Tendo Achillis	...	...	...	4	
		Claw Foot	...	...	...	11	
		Arthrodesis	...	...	...	3	
						—	21
<i>Birth Palsy</i>	...	Division of Internal Rotators	...	...	...	1	
		Exploration	...	...	...	1	
						—	2
<i>Congenital Torticollis</i>	...	...	...	...	...		12
<i>Congenital Dislocation of Hip</i>	...	Manipulation	...	...	...	11	
		Construction of Acetabular Shelf	...	...	...	3	
		Traction by Pin	...	...	...	1	
		Sub-trochanteric Osteotomy	...	...	...	2	
						—	17
<i>Rickets</i>	...	Osteotomies	...	...	...		21
<i>Congenital Club Foot</i>	...	Stabilisation	...	...	...	3	
		Wrench	...	...	...	7	
		Capsulotomy	...	...	...	1	
		Tenotomy of Tendo Achillis	...	...	...	4	
						—	15
<i>Tuberculous Arthritis</i>	...	Extra-articular Arthrodesis	...	...	...	1	
		Sub-trochanteric Osteotomy	...	...	...	1	
						—	2
<i>Coxa Vara</i>	...	Trans-trochanteric Osteotomy	...	...	...		1
<i>Infective Arthritis</i>	...	Open Reduction and Shelf	...	...	...
		Stabilisation	...	...	...	1	
		Arthrodesis	...	...	...	2	
		Exploration	...	...	...	1	
						—	4
<i>Fractures</i>	...	Mal-united	...	...	...		1
<i>Miscellaneous</i>	...	Removal of Ruptured Knee Cartilage	...	...	...	1	
		Plastic Operations	...	...	...	2	
		Plastic Operations with Skin Graft	...	...	...	2	
		Hammer Toe	...	...	...	2	
		Flat-foot (wrench)	...	...	...	1	
		Transposition of Nerve	...	...	...	1	
		Costo-transversectomy	...	...	...	1	
						—	10
							115

During the year 140 children were admitted to Biddulph Hospital and the following table gives particulars of the defects from which these children were suffering :—

<i>Bone Diseases</i>	...	Infantile Rickets	...	...	...	20	
		Adolescent Rickets	...	...	...	2	
		Osteomyelitis	...	...	...	3	
						—	25
<i>Bone Injuries</i>	...	Fractures	...	...	...		4

							No. of Operations.				
<i>Joint Deformities</i>	...	Congenital Dislocation of Hip					13				
		Congenital Dislocation of Patellæ					1				
							—	14			
<i>Joint Diseases</i>	...	Tuberculosis					1				
		Infective Arthritis					4				
		Pseudo-coxalgia					2				
		Pott's Disease					1				
							—	8			
<i>Joint Injuries</i>	...	Internal Derangement					...	...	—	1	
<i>Tendon Diseases</i>	...	Ganglion					...	...	...	—	1
<i>Skin and Subcutaneous Tissue</i>		Burns					...	...	...	3	
		Bursæ					...	...	...	3	
									—	6	
<i>Nervous System :—</i>											
(1) Central	...	Spastic Paraplegia					...	...	...	8	
		Infantile Hemiplegia					...	...	...	5	
		Anterior Poliomyelitis...					...	...	...	11	
(2) Peripheral	...	Birth Palsy					...	...	...	3	
										—	27
<i>Deformities :—</i>											
(1) Congenital	...	Torticollis					...	...	...	13	
		Coxa Vara					...	...	...	1	
		Spina Bifida					...	...	...	2	
		Scoliosis					...	...	...	2	
		Contracture of Feet and Knees					...	...	...	1	
		Talipes Equino Varus					...	...	...	4	
		Syndactyly					...	...	...	1	
										—	24
(2) Acquired	...	Genu Valgum					...	...	...	18	
		Genu Varum					...	...	...	2	
		Hammer Toe					...	...	...	2	
		Flat Foot					...	...	...	1	
		Pes Cavus					...	...	...	3	
		Scoliosis					...	...	...	1	
		Postural Defects					...	...	...	2	
		Kyphosis					...	...	...	1	
								—	30		
										140	

The number of plasters applied during the course of treatment of the patients for the year was 395. The number of treatments given in the Massage Department was 5,778.

Massage only	...	1,091
Electrical	...	298
Radiant Heat...	...	647
Exercises	...	3,742

Artificial sunlight was again carried out regularly during the winter months for all cases in which it was considered beneficial.

During the year there were several cases of Chickenpox. Some of the cases were treated at the Stoke-on-Trent Infectious Disease Hospital at Bucknall, but the remainder were retained at Biddulph. There were also a few cases of Scarlet Fever amongst the patients and Nursing Staff early in the year.

All patients and new members of the Staff of the Hospital are now tested for their susceptibility to Scarlet Fever when they arrive at the Hospital. Those showing a positive re-action to this test are immunised.

The following figures relating to the rainfall at Biddulph during 1931 may be of interest :—

Month.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total rainfall for year.
Total rainfall	3.69	4.17	0.19	4.33	3.34	5.56	3.88	5.96	3.45	1.18	5.74	2.11	43.60 ins.

STATISTICS OF MEDICAL TREATMENT.

The following tables show the amount of treatment which has been given during 1931. The kind of treatment and the results are also specified.

The first set of tables gives this information about those children who were examined at the routine medical inspection immediately preceding, i.e., in general, those children whose medical inspection took place in 1930.

TREATMENT OF DEFECTS.

New Cases.

DISEASE OR DEFECT.	NUMBER OF CHILDREN.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	53	15	37	52	48	2	2	...	1
Ringworm—Body ...	31	9	21	30	30	...	...	...	1
Scabies ...	46	17	29	46	46	...	...	...	...
Impetigo ...	461	192	256	448	444	3	1	3	10
Other Skin Disease ...	326	102	201	303	237	53	13	5	18
Ear Disease ...	632	216	260	476	278	161	37	88	68
Eye Disease (external and other)	526	217	245	462	381	73	8	33	31
Dental Disease ...	3165	1072	703	1775	1282	466	27	950	440
Other Diseases ...	1365	476	583	1059	547	427	85	168	138

TREATMENT OF VISUAL DEFECT.

NUMBER OF CHILDREN.

Referred for Refraction.	Submitted to Refraction.				Result of Refraction.								Not Re- fracted.	No informa- tion.
	Under Au- thority's Scheme— Clinic or Hospital.	By Private Prac- titioner or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner Hospital or otherwise.		Treatment other than by Glasses.		For whom no Treat- ment was considered necessary.			
					Glasses Prescrbd.	Glasses Obtained.	Glasses Prescrbd.	Glasses Obtained.	Recom- mended.	Re- ceived.				
3306	2328	94	134	2556	2159	2080	186	162	37	33	174	517	233	

TREATMENT OF DEFECTS OF NOSE AND THROAT.

NUMBER OF CHILDREN.

Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Un-treated.	No information.
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
1841	891	119	1010	126	535	170

The following set of tables gives similar information about those children who were recommended to obtain treatment at any inspection prior to the last :—

TREATMENT OF DEFECTS.

Old Cases.

DISEASE OR DEFECT.	NUMBER OF CHILDREN.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	11	2	8	10	10	...	...	1	...
Ringworm—Body ...	7	4	3	7	7	...	...	...	...
Scabies ...	7	...	7	7	7	...	...	...	...
Impetigo ...	25	6	18	24	24	...	...	...	1
Other Skin Disease ...	36	7	24	31	25	6	...	1	4
Ear Disease ...	133	21	43	64	34	23	7	35	34
Eye Disease (external and other)	51	21	11	32	22	9	1	10	9
Dental Disease ...	486	104	111	215	116	97	2	148	123
Other Diseases ...	338	93	71	164	64	93	7	92	82

TREATMENT OF VISUAL DEFECT.

NUMBER OF CHILDREN.

Referred for Refraction.	Submitted to Refraction.				Result of Refraction.								Not Re- fracted.	No infor- mation.
	Under Au- thority's Scheme— Clinic or Hospital.	By Private Prac- titioner or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner, Hospital or otherwise.		Treatment other than by Glasses.		For whom no Treat- ment was considered necessary.			
					Glasses Prescribd.	Glasses Obtained.	Glasses Prescribd.	Glasses Obtained.	Recom- mended.	Re- ceived.				
519	207	10	39	256	199	184	37	27	4	1	16	159	104	

TREATMENT OF DEFECTS OF NOSE AND THROAT.

NUMBER OF CHILDREN.

Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Un-treated.	No information.
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
648	162	18	180	32	301	135

OPEN-AIR EDUCATION.

Arrangements are in force with the County Boroughs of Burnley and Preston, the Municipal Borough of Nelson, and Urban District of Swinton and Pendlebury whereby certain children are enabled to receive education at their open-air schools.

There are no special open-air schools in the area of the Lancashire Education Committee, although the newer schools now offer increased facilities for open-air classes of which advantage is taken whenever the opportunity arises.

PHYSICAL TRAINING.

The physical training, as described in previous Reports, is under the general supervision of the County Medical Officer and his staff. During the year the Inspector of Physical Exercises visited 390 schools (412 Departments) and examined the children in physical exercises and organized games.

DANCING.

One of the proved methods of physical culture, especially in the case of girls, is the rhythmic dance. A demonstration was recently witnessed in one of the County's schools where about a dozen of the older girls were having an hour's lesson. The Medical Officer had discovered in this school numerous cases of round shoulders and other postural defects and discussed the matter with the Headmistress. She engaged the services of an expert teacher from a neighbouring city. An accomplished pianist was also discovered, and the lessons began (20 in the session) about two years ago. The effect has been that a wonderful improvement in the physique and carriage of the girls has already taken place. The round shoulders and curved spines are things of the past. The older girls, as they become proficient, transmit their knowledge of the methods to the younger ones and thus the whole Department benefits. The dancing takes place in a long classroom with maple (splinterless) flooring and windows widely open. The outstanding feature from a medical point of view is that every muscle and every joint in the body is brought into play in what is evidently a most enjoyable manner. Even remedial exercises for such things as flat feet were given as a dance, and the ingenuity of the teacher, who devises her own dances, is deserving of great praise.

The following is extracted from the Report of the Director of Education :—

ORGANIZED GAMES.

1.—Review of Reports, 1931-32.

The reports from Games Associations to which grants have been made by the Committee in the past year are very gratifying. It is clear that the activities of these Associations are being extended and organized to secure steadily increasing opportunities for their members to participate in a varied and growing programme of organized games and sports. As the games and sports equipment improves, the Associations are finding it possible to make increasing provision for the needs of all classes of children in the schools. A number of Associations report the formation of separate Boys' and Girls' sections each with their own organization within the parent organization. These in turn are co-operating with similar organizations in order to form extended Leagues and fixture Groups, which are developing into very healthy organizations over wide areas.

There is a steadily increasing co-operation between the Games Associations, and many of them have profitable and pleasant relations with Games Organizations in the Boroughs. Most of the Associations affiliate with the Lancashire County Schools' Football Association, and with the Lancashire County Schools' Athletic Association, and enter representative teams for their competitions. These competitions bring the schools into touch with schools of all types in the County.

Many Associations record their gratitude for the local provision of cups and trophies. The interest in cup competitions is keen and it is evident that a healthy spirit of friendly and sportsmanlike rivalry exists in the Associations who compete for the various cups or trophies which are offered throughout the County.

Some Associations are faced by the problem presented by the re-organization of the schools in their group into a Senior School, with contributory Junior Schools, but it is probable that a satisfactory solution will be evolved. Already in several cases the problem has been partially solved, although some time will elapse before sufficient experience is gained by these Associations to enable them to overcome all the difficulties inherent in the situation.

The Committee's Regulations allow a grant of half the expenditure of an Association during the year, with a maximum grant of £50. As in previous years, the amount of the grant applied for approximates to the amount provided in the Committee's Estimates.

Much valuable voluntary work is undertaken in all Associations by teachers, parents and others, and in some cases the public interest and support of the Associations is sufficiently strong to enable them to carry out their extensive activities without the assistance of a grant.

The growing success of Associations in sparsely populated areas is noteworthy. There are several reports of excellent work being done in spite of difficulties due to the wide separation and to the smallness of the schools.

2.—Increase in Associations.

The growth in organized games under the Committee's Scheme is shown below :—

Year.	No. of Associations Grant-aided.	No. of Schools in Associations.
1921-22	7	42
1926-27	27	209
1931-32	44	288
<i>Application for Grants.</i>		
1932-33	38	286

3.—Arrangements for 1932-33.

The amount provided in the Committee's Estimates for affording assistance to Organized Games' Associations was £1,000.

The following Table shows the number of schools or departments which are recommended for grants :—

District No.	Name of Association.	No. of Schools or Depts.
1	Leven and Crake Valley	9
	High Furness Rural Games	7
	Cartmel District Schools' Athletic	5
	North Lonsdale Schools' Athletic	17
3	Garstang and District Schools' Games Association	13
4	Fleetwood Elementary Schools' Games	4
	Thornton Cleveleys Elementary Schools' Games	6
7	South Ribble Elementary Schools' Games Federation :—	
	(a) Walton-le-Dale Schools' Sports	11
	(b) South Ribble Schoolgirls' Games	21
	(c) Leyland and District Schools' Athletic	5
	(d) West Lincs. Rural Schools' Games	6
	(e) Banks P.M. Football Association	1
9	Paddock	11
10	District 10 Schools' Games Association	8
11	District 11 Schools' Games Association	5
12	District 12 Schools' Games Association	9
14	Adlington Schools' Sports	3
	Coppull Schools' Games	4

District No.	Name of Association.	No. of School or Dept.
16	Ormskirk and District	8
	Skelmersdale	4
19	Orrell Schools' Games	4
	Ashton-in-Makerfield Schools' Sports	5
	Ashton-in-Makerfield Central Schools	2
21	Westhoughton Schools' Athletic	6
	Horwich Schools' Sports... ..	5
22	Kearsley Athletic	12
23	Peel Brow Schools' Sports	2
25	Prestwich and Whitefield Schools' Games	11
26	Littleborough, Smallbridge and Wardle Day Schools' Games	11
	Milnrow District Schools' Games	5
	Whitworth District Schools' Games	5
	Norden District Games	3
28	Litherland Schools' Organized Games	9
29	Whiston Central Schools'	2
31	Tyldesley Schools' Sports	10
	Atherton Schools' Athletic	9
32	Makerfield (Golborne) Sports	3
	Makerfield (Lowton) Sports	3
	Makerfield (Glazebury) Sports	3
33	Irlam and Cadishead Schools' Sports	6
	Urmston and Flixton District Schools' Athletic	6
34	Worsley and District Schools' Sports	7
	Total	286

SWIMMING.

1.—Progress in Swimming Instruction.

During the year 1931, increasing advantage of the opportunities provided by the Committee for Swimming Instruction was taken, and the encouragement of this branch of Physical Training was appreciated by parents, teachers and children.

The advance which has been made in recent years is shown in the Table given below:—

	Total No. of children.
1929	6,823
1930	8,129
1931	8,753
1932	9,035

2.—Issue of Swimming Certificates.

The Committee's action in issuing Swimming Certificates has been welcomed by all schools, and reports show that they provide a valuable incentive to proficiency. During the last season, 1,608 certificates have been gained and issued.

3.—*Instruction at Baths.*

Instruction at the Baths has been given mainly by teachers, but much assistance has been received from local Baths officials, whose help is warmly appreciated. Facilities are often available for older children for instruction in Diving and in Life Saving, and several schools report successes of children in the examination of the Royal Life Saving Society.

As noted in previous years, annual Swimming Galas continue to be held with increasing successes and the local support given and the interest shown in them is gratifying.

The Committee may desire to note the help given by Borough Authorities in arranging for the use of Baths wherever possible in cases where Baths are not available in the County Area.

4.—*Payments for Conveyance and Admission.*

The arrangements for payment for admission and conveyance vary; in some cases the Baths Authorities prefer to accept a fixed sum for the admission of the children, while in others payment is made for each attendance. These payments are made by the Head Teachers, and amount in certain schools to over £30. The sum is refunded at the close of the season.

5.—*Recommendations for 1932.*

The Table which follows shows particulars of the schools proposing to give Swimming Instruction during the current year. The amount provided in the Estimates for this purpose was £1,800.

District No.	Name of School.	No. of Schools or Depts.	Baths to be Attended.
1	Askam Senior C. Dalton-in-Furness Broughton Road C. Dalton-in-Furness Dowdales Central C. Dalton-in-Furness C.E. Kirkby Ireleth, The Burlington ...	5	Barrow Do. Do. Do. Do.
2	Nether Kellet C.	1	Lancaster
4	Poulton-le-Fylde C.E. Fleetwood St. Mary's R.C. Fleetwood Bailey Senior C. Thornton Cleveleys Senior C.	6	Kirkham Fleetwood Do. Do.
5	Kirkham C.E. Kirkham Willows R.C. Wesham C.E. Wesham R.C. Freckleton C.E. Kirkham and Wesham C.	7	Kirkham Do. Do. Do. Do. Do.
6	Longridge St. Wilfrid's Longridge R. Smith's Boys' Woodplumpton C.E.	3	Preston Do. Do.
7	Brownedge R.C. Walton-le-Dale St. Patrick's R.C. Walton-le-Dale, Lostock Hall C. North Meols, Banks P.M. North Meols St. Stephen's Longton Council	7	Walton-le-Dale Do. Do. Southport Do. Do.
10	Salesbury Livesey, Cherry Tree	2	Blackburn Do.

District No.	Name of School.	No. of Schools or Depts.	Baths to be Attended.
11	Brierfield Walter Street Council ... Brierfield Holy Trinity ... Briercliffe Council ... Worsthorne Council ...	5	Burnley Do. Do. Do.
12	Barrowford Council ... Higherford R.C. ... Trawden Council ... Foulridge C.E. ...	4	Colne and Nelson Do. Do. Do.
13	Padiham C.E. ... Padiham St. John's R.C. ... Padiham Council Senior ... Hapton C.E. ... Hapton Council ...	5	Burnley Do. Do. Do. Do.
14	Withnell, Brinscall W. ... Withnell St. Joseph's R.C. ... Withnell C.E. ... Withnell Fold W. ... Withnell U.M. ... Adlington C.E. ... Anderton St. Joseph's R.C. ... Coppull Moor C.E. ... Charnock Richard C.E. ... Coppull St. Oswald's R.C. ... Adlington St. Paul's C.E. ... Anderton, Adlington and District Council ...	12	Brinscall Do. Do. Do. Do. Do. Do. Do. Do. Do. Do. Do. Do.
16	Ormskirk U.C. ... Skelmersdale R.C. ... Skelmersdale C. ... Skelmersdale, Blaguegate W. ... Lathom and Burscough, Burscough R.C. ... Skelmersdale Endowed ...	6	Southport Do. Do. Do. Do. Do.
18	Shevington Broad o'th' Lane Council ...	1	Wigan
19	Orrell R.C. ... Orrell St. James' Road C. ... Ashton-in-Makerfield Park Lane Undenominational ...	3	Wigan Do. Do.
20	Turton, Walmsley C.E. ... Turton, Eagley Mills ...	2	Egerton Egerton
21	Westhoughton, Hulton C.E. ...	1	Bolton
22	Kearsley West C. ... Little Hulton East C. ... Little Hulton, Wharton Pres. ...	3	Farnworth Do. Do.
23	Walmsley-cum-Shuttleworth, Buckhurst ...	1	Bury
25	Prestwich Hope Park C. ... Whitefield, Stand All Saints' ... Unsworth C.E. ... Whitefield Higher Lane C. ... Prestwich, Heaton Park C. ... Prestwich St. Margaret's C.E. ... Prestwich St. Hilda's C.E. ...	7	Broughton Radcliffe Do. Do. Do. Do. Do.

[illegible]

District No.	Name of School.	No. of Schools or Depts.	Baths to be Attended.
32	Lowton Council	3	Leigh
	Lowton St. Mary's		Do.
	Culcheth, Risley C.		Do.
35	Denton Christ Church C.E.	16	Gorton
	Denton Central C.		Do.
	Haughton Green C.E.		Hyde
	Denton, Haughton St. Anne's C.E.		Do.
	Audenshaw C.E.		Ashton-u-Lyne
	Waterloo Council		Do.
	Lees, Leesfield C.E.		Oldham
	Lees Zion U.M.		Do.
	Lees St. Edward's R.C.		Do.
	Failsworth C.E.		Newton Heath
	Failsworth Holy Trinity		Do.
	Failsworth St. Mary's		Do.
	Failsworth Minor Street C.		Newton Heath and Hollinwood
	Bardsley C.E.		Hathershaw
	Audenshaw Poplar Street C.		Whitworth, Manchester

SCHOOL CAMPS AND SCHOOL JOURNEYS.

There has been an increase in the number of schools and children who have undertaken this form of school activity as is shown by the table given below :—

Year.	No. of Schools.	Nos. taking part.	
		Children.	Teachers.
1930-31 ...	30	955	76
1931-32 ...	54	1587	107

The Camps or Journeys were usually held either at Whitsuntide, or in the months of July and August, and they varied in duration from one week, the usual period, to three weeks. As in the preceding year, the places selected for School Camps and School Journeys have been widely distributed and varied in character. Some schools have visited the Lancashire seaboard, the slopes of its eastern hills, or the Lake District, a large number have journeyed to Centres in North Wales, some have gone to Staithes, while as in the previous year there have been instances of schools travelling greater distances. One of the most interesting of these was a joint Camp undertaken by two small County schools at Dymchurch. On the journeys to and from Dymchurch two days were spent in London, where specially prepared programmes of visits to places of interest were carried out; the visits included a tour through the Houses of Parliament, where the children were entertained by the Local Member. As in the previous year, the exchange of hospitality between German teachers and children in Hamburg and one of the Committee's schools has been continued.

The experience which had been gained in the previous year has enabled greater benefit to be derived from school journeys or attendance at School Camps. Interesting educational programmes have been prepared in advance in many schools, and booklets, compiled, illustrated and reproduced in school, containing much information as to the characteristics and history of the district to which the visit was being paid, and suggesting points for investigation and study during the period spent on the journey or in camp, have been supplied to each child. The reports received from the schools comment in all cases on the educational, physical and social benefits resulting from the school journeys and the records of camp life, illustrated in many cases by photographs of scenes and incidents which have been sent for information, have been of great interest. It is pleasing to record again both the appreciation expressed by parents of the advantages gained by the children who have joined in the School Camps and School Journeys and the assistance given by the parents and others, especially by School Managers and members of Local Committees, assistance which in many cases had made the Camp or Journey possible.

PROVISION OF MEALS AND MILK FOR ELEMENTARY SCHOOL
CHILDREN.

In the Annual Report for 1929 full details were given of the scheme which was inaugurated at the end of the year 1928 for the provision of mid-day meals, fresh milk, and cod liver oil, etc., for school children. The method of administering the scheme has not changed. It will be seen from the following tables that the number of individual children receiving meals or milk during the year has slightly decreased. During the year 1931 a mid-day meal or fresh milk was supplied to children in 20 of the 34 Local Education Districts in the Administrative County area; and of the number of children on the roll of Elementary Schools in the County Area 5·87 per cent. received either milk or mid-day meals.

During the year the provision of mid-day meals for children was commenced in the following townships:—Padiham, Ramsbottom, Bury Rural District (Walmersley) and Tottington.

The provision of fresh milk was commenced during the year in the townships of Preston Rural District (Grimsargh), Ramsbottom, Tottington and Bury Rural District (Walmersley and Ainsworth).

The average cost per meal per child in 1931 was 3·89d. for food only, and 5·46d. for food and administration, compared with 4·05d. and 5·73d. respectively in 1930. It should be pointed out, however, that in the few cases where meals are supplied in a café or where the contractor supplies and also serves the meals, the cost is shown under the heading as the cost of food only, but actually the cost includes a certain amount of administration.

The average cost per pint of milk in 1931 was 2·39d. for milk only, and 2·63d. for milk and administration, compared with 2·53d. and 2·69d. respectively in 1930.

The following table shows the townships in which mid-day meals were provided, the number of meals provided, and the cost:—

Area No.	Township.	Amount spent.		No. of meals provided.	Average cost per meal.	
		Food.	Total.		Food.	Total.
		£ s. d.	£ s. d.		d.	d.
9	Great Harwood ...	400 8 4	484 10 8	31594	3·04	3·68
	Clayton-le-Moors ...	195 8 7	210 8 4	15216	3·08	3·32
	Church ...	165 10 9	178 15 7	12540	3·17	3·42
	Rishton ...	73 19 0	84 5 1	5778	3·07	3·50
	Oswaldtwistle ...	161 1 0	174 17 8	12884	3·00	3·26
13	Padiham ...	536 0 1	640 2 3	36755	3·50	4·18
14	Adlington ...	174 18 4	327 12 3	9030	4·65	8·71
	Chorley R.D. (Coppull)	128 4 4	216 1 1	7693	4·00	6·74
18	Standish ...	295 6 0	426 5 5	23624	3·00	4·33
	Blackrod ...	111 8 8	208 17 1	6686	4·00	7·50
	Aspull ...	614 0 0	915 1 0	36840	4·00	5·96
	Wigan R.D. (Crooke)	127 3 3	241 14 7	10173	3·00	5·70
19	Ashton-in-Makerfield...	372 12 9	794 13 7	48425	1·85	3·94
21	Westhoughton ...	690 17 6	1060 3 8	35000	4·74	7·27
	Horwich ...	331 12 0	534 10 1	19896	4·00	6·45
22	Kearsley ...	587 7 11	755 7 2	28195	5·00	6·43
	Little Hulton ...	462 1 11	589 5 11	20422	5·43	6·93
	Little Lever ...	272 11 3	363 6 3	13083	5·00	6·66
	Barton-upon-Irwell R.D. (Clifton)	122 11 3	193 10 7	5883	5·00	7·90
23	Ramsbottom ...	205 16 2	270 8 4	9250	5·34	7·02
	Bury R.D. (Walmersley)	91 0 6	99 4 4	3641	6·00	6·54
25	Whitefield ...	29 17 11	42 13 11	1435	5·00	7·14
	Prestwich ...	169 15 10	242 12 3	8150	5·00	7·14
	Bury R.D. (Outwood)	255 2 1	330 7 2	12245	5·00	6·47

Area No.	Township.	Amount spent.		No. of meals provided.	Average cost per meal.	
		Food.	Total.		Food.	Total.
30	Haydock	£ s. d. 1235 14 7	£ s. d. 1679 2 3	77056	d. 3·85	d. 5·23
	Newton-in-Makerfield	1133 15 8	1507 14 1	72353	3·76	5·00
	Warrington R.D. (Burtonwood)	475 12 11	616 14 7	29560	3·86	5·01
31	Tyldesley	150 16 10	191 8 0	8045	4·50	5·71
	Atherton	290 3 1	399 3 7	15475	4·50	6·19
	Leigh R.D. (Astley) ...	139 11 1	224 14 1	7443	4·50	7·25
32	Golborne	427 7 8	573 3 0	25643	4·00	5·36
	Leigh R.D. (Lowton)	128 9 4	196 4 8	7708	4·00	6·11
34	Worsley	519 14 8	779 11 11	26473	4·71	7·07
		£11076 1 3	15552 10 5	684194	3·89	5·46

The following table shows the townships in which fresh milk was provided, the quantity of milk provided, and the cost:—

Area No.	Township.	Amount spent.		No. of pints of milk provided.	Average cost per pint.	
		Milk.	Total.		Milk.	Total.
1	Dalton	£ s. d. 277 9 11	£ s. d. 306 10 2	27725	d. 2·40	d. 2·65
	Ulverston	139 1 0	154 16 0	13364½	2·50	2·78
	Grange	7 4 2	7 12 2	645	2·68	2·83
	Ulverston R.D.	86 4 6	97 1 6	9031½	2·29	2·58
6	Longridge	42 4 4	42 4 4	2896	3·50	3·50
	Preston R.D.	1 10 8	1 10 8	105	3·50	3·50
7	Walton-le-Dale	10 16 2	10 16 2	711	3·65	3·65
12	Barrowford	0 9 5	0 9 5	40	2·83	2·83
14	Withnell	83 7 0	90 4 0	6856	2·92	3·16
	Chorley R.D.	77 0 5	84 4 5	6422½	2·88	3·15
15	Leyland	29 16 9	38 16 9	2011	3·56	4·64
	Chorley R.D.	71 6 10	85 7 4	6147	2·79	3·33
18	Blackrod	41 7 7	44 15 7	3713	2·67	2·89
	Wigan R.D.	78 1 6	80 19 6	6820	2·75	2·85
19	Upholland	172 11 10	186 18 4	20711	2·00	2·17
	Orrell	279 11 0	303 18 6	33546	2·00	2·17
	Billinge	92 8 10	96 15 4	10178½	2·18	2·28
	Abram	101 7 8	106 17 8	11378½	2·14	2·25
23	Ramsbottom	19 14 9	23 0 9	1895½	2·50	2·92
	Bury R.D.	5 17 6	6 11 6	564	2·50	2·80
24	Tottington	62 14 7	79 14 7	7290½	2·07	2·62
	Bury R.D.	7 15 0	9 15 0	620	3·00	3·77
25	Prestwich	0 6 5	0 7 9	28	2·75	3·32
30	Warrington R.D.	258 18 10	265 9 10	23183½	2·68	2·75
33	Irlam	140 16 11	171 4 5	13850	2·44	2·97
		2088 3 7	2296 1 8	209733	2·39	2·63

The following table shows the Number of individual Children provided with either Milk or Mid-day Meals:—

Township.	No. of individual children who received	
	Milk.	Mid-day Meals.
Dalton	229	...
Ulverston	126	...
Grange	3	...
Ulverston R.D.	79	...
Longridge	13	...
Preston R.D.	3	...
Walton-le-Dale	10	...
Great Harwood ... ..	...	284
Clayton-le-Moors ... ..	...	123
Church ... ..	...	102
Rishton ... ..	...	58
Oswaldtwistle ... ..	...	130
Barrowford	1	...
Padiham ... ..	...	338
Withnell	38	...
Adlington ... ..	...	47
Chorley R.D.	80	54
Leyland	25	...
Standish ... ..	...	179
Blackrod	34	37
Aspull ... ..	...	235
Wigan R.D.	29	25
Upholland	220	...
Orrell	362	...
Billinge	69	...
Ashton-in-Makerfield ... ..	...	345
Abram	85	...
Westhoughton ... ..	...	254
Horwich ... ..	...	151
Kearsley ... ..	...	180
Little Hulton ... ..	...	162
Little Lever ... ..	...	123
Barton-upon-Irwell R.D. ... ..	...	40
Ramsbottom	19	97
Bury R.D.	12	124
Tottington	69	...
Whitefield ... ..	...	17
Prestwich	2	78
Haydock ... ..	...	450
Newton-in-Makerfield ... ..	...	572
Warrington R.D.	126	184
Tyldesley ... ..	...	41
Atherton ... ..	...	87
Leigh R.D. ... ..	...	78
Golborne ... ..	...	127
Irlam	60	...
Worsley ... ..	...	209
Totals	1694	4931

During the year Cod Liver Oil and Malt, etc., as shown below, were supplied to school children —

		£	s.	d.
6178 lbs. Cod Liver Oil and Malt ... ..	... at a cost of	206	5	0
174 bottles of Cod Liver Oil ... ..	...	4	5	0
81 lbs. Vitamalt ... ..	...	5	14	9
21 tins Virol ... ..	...	1	1	0
4 bottles Cod Liver Oil Emulsion ... ..	...	0	6	0
19 bottles Aberdeen Emulsion ... ..	...	1	0	7

£218 12 4

CO-OPERATION OF PARENTS.

During the year the Medical Officers interviewed 28,623 parents in schools and clinics and visited 645 homes, whilst the Nurses interviewed in school 1,198 parents and visited 14,485 homes; 122,830 attendances were made by children of pre-school age at Child Welfare Centres, each one representing an interview of a parent with either Doctor or Nurse.

In addition, the Nurses paid 91,708 visits to the homes of young children, infants or expectant mothers, etc. The opportunities thus shown for interviews with parents are frequent, and there is, at the present time, scarcely any of the hostility which was not uncommon in the early days of School Medical Inspection.

CO-OPERATION OF TEACHERS.

Teachers continue to take an eager interest in the work of medical inspection and place all facilities at the disposal of the Medical Officer and School Nurse. Their advice with regard to home conditions and status of pupils and parents is always welcomed.

CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

The following table shows some of the figures relating to the School Attendance Officers' duties in 1931 :—

No. of interviews with Medical Officers	...	...	...	1,056
No. of interviews with School Nurses	...	...	...	1,515
No. of visits to homes, arising out of Medical Inspection	...	...	...	1,685
No. of cases specially presented to the Medical Officers and School Nurses	...	...	...	1,753

CO-OPERATION OF RATE-AIDED AND VOLUNTARY BODIES.

The Medical Officers are in touch with the rate-aided bodies such as Guardians' Committees and District Councils; the School Attendance Officers, School Nurses and Health Visitors very often being the media of communication.

The Attendance Officers continue to perform numerous duties not directly connected with school attendance. The supervision of the employment of children entails work at irregular hours and often on Saturdays and Sundays. Other work connected with the physical welfare of children and with the activities of the School Medical Department continues to increase. Cases where children are neglected by their parents are frequently dealt with in co-operation with the National Society for the Prevention of Cruelty to Children without resorting to prosecution. The Attendance Officers are also frequently called on to arrange for sending children to convalescent homes or to the seaside for recuperation after illness, and they are often closely concerned with the arrangements for the transfer of children to Special Schools. The Annual Reports from the districts invariably record gratifying instances of active philanthropic work.

The Local Area Clerks are fully acquainted administratively and otherwise with the voluntary agencies for the relief of necessitous school children.

BLIND, DEAF, DEFECTIVE, AND EPILEPTIC CHILDREN.

The methods and policy of the Committee for ascertaining and dealing with children who are defective within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1899 and 1914, are unchanged and have previously been described.

BLIND CHILDREN.

The number of children on the Special Register who were considered as blind children in the year 1931 was 60 boys and 52 girls. Of these, 12 boys and 17 girls were totally blind, and 48 boys and 35 girls had some residual vision.

Attending Certified Schools or Classes for the Blind were 39 boys and 32 girls. During the year 10 blind children were reported on, and in the following table the causes of blindness are reported as :—

Myopia	...	...	...	...	...	...	4
Coloboma	...	...	...	...	...	...	1
Congenital Cataract	...	...	...	...	...	...	1
Congenital Nystagmus	...	...	...	...	...	...	1
Injury and Sympathetic Irido Cyclitis	...	...	...	...	...	...	1
Optic Atrophy and Choroiditis	...	...	...	...	...	...	1
Microphthalmia and Congenital Nystagmus	...	...	...	...	...	...	1
							—
							10
							=

The number of children of Elementary School age who were maintained in 1931 at the following Institutions for the Blind was 39 boys and 32 girls. The annual cost of maintenance was £3,960 or an average cost of £55 15s. 6d. a child.

	Boys.	Girls.	Total.
Burnley Blind School	1	1	2
Catholic Blind Asylum, Liverpool	1	5	6
Homes for the Blind, Fulwood	10	7	17
Liverpool School for the Blind	4	5	9
Oldham Blind School	4	5	9
Thomasson Memorial School, Bolton	6	1	7
Henshaw's Institution, Manchester	11	6	17
Sunshine Home, Southport	2	1	3
Chorley Wood Cottage, Watford	—	1	1
	—	—	—
	39	32	71
	=	=	=

DEAF CHILDREN.

On the Register for 1931 there were 62 boys and 56 girls, of whom 28 boys and 26 girls were totally deaf, and 34 boys and 30 girls had residual hearing. Of all these 118 children, there were in attendance at the Special Certified Schools or Classes for the Deaf 36 boys and 36 girls, as shown below. The annual cost of maintenance was £4,851 or an average cost of £67 7s. 6d. a child.

	Boys.	Girls.	Total.
Burnley Deaf School	1	2	3
Liverpool School for the Deaf...	...	3	3
Oldham Deaf School	1	2	3
Royal Schools for the Deaf, Manchester	17	14	31
St. John's Institution, Boston Spa	4	3	7
Thomasson Memorial School, Bolton...	2	4	6
Royal Cross Schools for the Deaf, Preston	11	8	19
	—	—	—
	36	36	72
	=	=	=

During the year 4 deaf children of Elementary School age were reported on, and the following causes of their deafness are shown :—

Congenital	...	...	...	...	2
Double Otitis Media (Diphtheria)	...	...	...	...	1
Inner Ear Defect	...	...	...	...	1
					—
					4
					=

The importance of sending these cases for special training at the earliest age, at four if possible, cannot be sufficiently impressed on parents and teachers; time lost at the beginning can never be recovered.

EPILEPTIC CHILDREN.

On the Register there are noted 117 boys and 75 girls as suffering from Epilepsy, of whom 47 are severe and 145 not severe. Fourteen of these children are maintained at Institutions for Epileptics, at a cost of £870, or an average cost of £62 2s. 10d. a child.

MENTALLY DEFECTIVE CHILDREN.

There were, in 1931, 402 children noted in the Elementary Education Area as being feeble-minded, viz., 243 boys and 152 girls. In addition, 37 children were notified to the Local Control Authority, in this case the Lancashire Asylums Board, as being ineducable.

EDUCATION OF THE BLIND.

The education of the Blind was fully described in last year's Report. It is still necessary to point out that Blind Children educated at Special Schools are not necessarily Blind Persons when they reach school leaving age. The position of these children is unfortunate, for, though they may need specialised vocational training after this age, they are not entitled to receive it under any scheme dealing with Blind Persons.

During the past year the Lancashire Education Committee paid the training fees in respect of 98 students. The following table shows the Institutions the trainees attended, and also the occupations for which they were being trained.

LIVERPOOL SCHOOL FOR THE BLIND,
HARDMAN STREET.

	Males.	Females.	Total.
Basket Making	2	-	
Boot Repairing	4	-	
Chair Seating and Light Basketry	-	1	
Machine Knitting	-	2	
Chair Seating and Machine Knitting... ..	-	1	
Machine Knitting and Chair Caning	-	1	
Total	6	5	11

CATHOLIC BLIND ASYLUM, LIVERPOOL.

Chair Caning and Rush Seating	-	1	
Mat Making	2	-	
Basket Making	1	-	
Total	3	1	4

WORKSHOPS FOR THE BLIND, CORNWALLIS STREET,
LIVERPOOL.

Mat Making	1	-	
Chair Seating and Mat Making	1	-	
Total	2	-	2

BLACKBURN WORKSHOPS FOR THE BLIND.

Chair Caning and Machine Knitting	-	1	
Brush Making	2	-	
Total	2	1	3

BURNLEY WORKSHOPS FOR THE BLIND.

						Males.	Females.	Total.
Machine Knitting	...	...	...	...	...	-	3	
Boot Repairing	...	...	...	...	...	2	-	
Basket Making	...	...	...	...	...	1	-	
Total	...	...	...	...	...	3	3	6

BOLTON WORKSHOPS FOR THE BLIND.

Brush Making	...	...	...	...	...	4	-	
Cane Seating	...	...	...	...	...	-	2	
Basketry	...	...	...	...	...	-	2	
Hand Knitting and Rug Making	...	...	...	...	...	-	1	
Mat Making	...	...	...	...	...	8	-	
Rug Making, Basketry and Knitting...	...	...	...	...	...	-	1	
Total	...	...	...	...	...	12	6	18

HENSHAW'S INSTITUTION FOR THE BLIND, MANCHESTER.

Piano Tuning and Repairing	...	...	...	...	...	3	-	
Machine Knitting	...	...	...	...	...	-	7	
Skip Making and Basketry	...	...	...	...	...	1	-	
Brush Making	...	...	...	...	...	5	-	
Light Basketry	...	...	...	...	...	-	3	
Boot Repairing	...	...	...	...	...	3	-	
Furniture Making	...	...	...	...	...	6	-	
French Polishing	...	...	...	...	...	-	1	
Music Teaching...	...	...	...	...	...	-	1	
Light Skip Making	...	...	...	...	...	2	-	
Basket Making	...	...	...	...	...	-	1	
Machine Knitting and Light Basketry	...	...	...	...	...	-	1	
Piano Tuning and Furniture Assembling	...	...	...	...	...	1	-	
Hand Loom Weaving	...	...	...	...	...	-	1	
Chair Caning	...	...	...	...	...	-	1	
Total	...	...	...	...	...	21	16	37

HOMES FOR THE BLIND, FULWOOD.

Brush Making	...	...	...	...	...	3	-	
Boot Repairing	...	...	...	...	...	5	-	
Cane and Rush Seating	...	...	...	...	...	-	1	
Machine Knitting	...	...	...	...	...	-	5	
Light Basketry	...	...	...	...	...	-	1	
Total	...	...	...	...	...	8	7	15

ROYAL NORMAL COLLEGE, LONDON.

Teaching of Music	...	...	...	...	...	-	1	
Piano Tuning and Teaching of Music...	...	...	...	...	...	1	-	
Total	...	...	...	...	...	1	1	2

Totals, Males	...	...	...	58
Totals, Females	...	...	...	40
Total	...	...	...	98

TRAINING OF DEAF PERSONS.

During the year twenty-nine Deaf Persons received secondary education at the following Institution :—

Royal Residential School for the Deaf, Old Trafford.

INSPECTION OF SECONDARY SCHOOL CHILDREN.

The same staff is employed for the inspection of Secondary School children as in the case of Elementary Inspection, except that a woman Medical Officer devotes the whole of her time to the inspection of the girls.

The inspections take place on the school premises, unless a convenient Clinic, a few doors away, can be used for the purpose. In order to interfere as little as possible with the curriculum, the Head Teachers are consulted some time in advance as to the most convenient time for inspection, which is usually in the autumn term. All entrants are inspected and, thereafter, inspections are made yearly from the age of 12 onwards. Parents are notified, in most cases personally, of any defects found, and a list of such defects is left and discussed with the Head Teacher, whose valuable co-operation for remedial purposes cannot be too highly estimated. Special attention is paid to Bursar candidates with reference to their fitness and subsequent probability of acceptance for the teaching profession.

The Secondary Schools number 47, viz., 11 Boys, 10 Girls and 26 Mixed, containing in all 15,081 pupils, together with three Day Continuation Schools and eight Junior Technical Schools whose combined average attendance is approximately 800. In addition to the Medical Inspection of all the Secondary School children in schools "provided" by the County, the services of the staff have been made available for inspection in the six "aided" school, but to date only one such school has taken advantage of the facilities.

METHOD OF INSPECTION.

The method of inspection has been described in detail in previous Annual Reports, and need not be repeated here.

In the following table the pupils attending these schools are shown in two groups, i.e., those attending Secondary Schools and those attending Technical and Continuation Schools. The table shows the number of pupils examined during 1931 in the various age groups :—

Age.	No. of Pupils examined.			
	Secondary Schools.		Technical and Continuation Schools.	
	Boys.	Girls.	Boys.	Girls.
8	23	4	...	...
9	62	22	...	...
10	214	103	...	...
11	1,025	601	...	...
12	1,223	814	14	...
13	999	806	160	1
14	1,053	756	189	28
15	1,031	728	95	38
16	578	425	68	2
17	286	231	13	...
18	105	106	...	...
19	14	5	...	...
TOTALS ...	6,613	4,601	539	69

Number of Pupils re-examined—

Secondary Schools ...	628
Technical and Continuation Schools ...	12

Boys.

Girls.

			Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19			
Ear	Diseases.	Defective Hearing	T	0.2	0.3	0.4	0.2	0.4	0.2	0.4	0.7	1.4	0.5	0.3	0.7	0.9			
		O	0.3	0.7	0.3	1.0	0.7	0.7	1.0	1.1	1.0	0.9	1.2	1.5	1.4	0.3			
		Otitis Media	T	0.2	0.4	0.3	0.4	0.3	...	...	0.1	...	...	...	...	...	...
		O	0.2	0.2	0.1	...	...	...	0.2	...	...	...	...	...	...	...	...
		Other Ear Diseases	T	0.8	0.6	0.5	0.6	0.1	0.2	0.2	0.7	0.4	0.6	0.5	0.4	0.2	...		
Nose and Throat.		O	0.2	0.2	0.2	...	0.2	0.2	...	...	0.1	0.2	0.1	0.1	...	...	
		Enlarged Tonsils	T	1.1	0.7	0.8	0.9	0.8	0.2	0.2	2.2	1.2	1.9	1.1	1.5	0.5	0.3		
		O	10.1	10.5	8.4	9.1	8.1	5.9	3.0	12.2	12.7	9.8	9.1	9.1	8.5	6.1			
		Adenoids.....	T	0.2	...	0.1	...	0.1	...	...	0.3	0.1	0.1	...	...	...	...
		O	0.5	0.7	0.5	0.6	0.2	0.3	0.5	0.1	0.4	...	...	...	...	...	...
Nose and Throat.		Enlarged Tonsils and Adenoids ..	T	0.5	0.7	0.5	0.3	0.1	...	0.2	0.5	0.4	0.6	0.1	...	0.5	...		
		O	1.8	1.6	1.9	1.4	1.0	1.0	0.7	0.4	0.1	0.4	...	0.4	0.5	0.3			
		Enlarged Cervical Glands	T	...	...	...	...	0.1	...	...	0.1	0.1	...	0.1	0.1	...	...
		(Non-Tubercular)	O	6.6	5.6	3.9	5.8	2.0	1.6	1.2	1.5	1.2	0.4	0.1	0.4	...	0.3		
		Defective Speech	T	0.09		
Teeth.		O	0.5	0.3	0.3	0.6	0.3	1.2	1.0	0.3	0.4	0.2	...	0.1	0.5	...			
		Four or more Carious	T	8.6	6.5	8.3	10.1	9.1	11.8	7.9	7.0	8.1	11.0	14.3	14.6	12.7	8.5		
		O	2.2	1.7	0.7	1.3	1.4	0.7	0.2	2.1	1.6	1.7	1.1	1.2	1.6	0.6			
		Sepsis	T	0.7	0.4	0.6	0.3	0.3	0.5	0.5	0.3	0.2	0.1	0.1	0.3	...	0.9		
		O	0.09	0.1		
Heart and Circulation.		Organic	T	...	...	...	...	0.1	...	0.2	...	0.1	0.1	...	...	...
		O	0.6	0.2	0.3	0.3	0.5	1.2	0.5	0.4	1.2	0.5	0.7	1.4	0.7	0.3			
		Functional	T	0.1	0.1	0.1		
		O	1.5	1.9	1.8	1.8	1.5	2.1	1.7	1.2	0.6	1.0	0.5	0.5	0.9		
		Anaemia	T	0.08	0.08	0.1	0.7	1.2	1.2	0.5	1.9	2.0		
Lungs.		O	0.2	0.08	0.2	0.2	...	0.2	...	1.5	1.1	0.7	1.6	1.2	1.4	0.9			
		Bronchitis	T	0.3	0.2	0.2	0.1		
		O	0.9	1.1	0.7	0.5	1.0	0.9	0.5	...	0.1		
		Other Non-Tubercular Diseases	T	0.08	...	0.1	...	0.1	0.2	0.2	0.2	0.3		
		O	0.4	0.2	...	...	0.2	0.2	0.2	1.0	0.9	0.5	0.5	0.7	0.5	0.3	
Tuberculosis.	Pulmonary.	Definite	T	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Suspected	T	...	...	...	...	0.1	...	...	...	...	0.1	...	0.2	...	
		O	...	...	...	...	...	...	...	...	0.1	...	...	...	...	...
		Glands.....	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Non-Pulmonary.	O	0.08	...	...	0.09	...	...	...	...	...	...	...	...	...	...
		Spine	T	...	...	...	...	...	...	...	...	...	...	...	...	0.2	
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Hip	T	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nervous System.		Other Bones and Joints	T	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	0.4	0.2	...	
		Skin	T	0.08		
		O		
		Epilepsy	T		
Deformities.		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chorea.....	T	0.2	0.1		
		O	...	0.08		
		Infantile Paralysis.....	T		
		O	0.2	0.1	0.5		
Deformities.		Rickets	T	...	...	...	...	...	...	...	...	...	...	...	...	...
		O		
		Spinal Curvature	T	0.2	0.08	0.3	0.09	0.1	...	0.2	0.3	0.1	0.1		
		O	0.5	0.4	0.5	0.8	0.2	...	0.5	0.4	0.5	0.4	0.7	0.4	0.2	0.3			
		Other Forms	T	2.0	1.8	1.3	0.9	1.2	0.3	0.5	0.7	0.2	0.5	1.3	1.1	0.5	1.2		
Deformities.		O	2.6	5.4	3.1	2.3	3.6	1.7	2.5	0.5	0.5	0.7	0.8	0.3	0.9	0.3			
		Other Diseases or Defects	T	1.0	0.7	0.6	0.7	1.2	0.5	1.0	1.8	1.7	3.5	2.4	1.8	2.8	2.6		
		O	2.5	2.0	2.0	2.9	2.9	0.9	1.5	2.1	1.8	2.0	2.6	3.0	5.2	5.3			

Boys.

Girls.

		Ages 8-11	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
Nervous System.	Epilepsy	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chorea.....	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Infantile Paralysis.....	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rickets	T	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...
Deform- ities.	Spinal Curvature	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Forms	T	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Diseases or Defects	T	...	21.4	3.8	...	2.1	...	...	...	...	...	...	...	...
		O	...	...	4.4	1.1	...	...	...	...	...	...	...	...	...
		O	...	...	6.2	1.6	1.1	4.4	...	...	...	3.6	2.6	...	...
		O	...	...	0.6	1.6	2.1	2.9	...	...	...	...	2.6	...	...

The following table gives a summary of the visual acuity as determined by the Snellen Test Types :—

TECHNICAL AND CONTINUATION SCHOOLS.

Boys.

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8																	
9																	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	14	100.0	92.9	...	...	...	...	...	...	7.1	...	...	...	...	...	...	...
13	160	78.1	81.3	7.5	7.5	5.6	3.7	3.7	1.9	0.6	1.9	1.9	3.1	2.5	0.6	...	...
14	189	79.9	78.3	5.8	9.0	4.8	4.2	3.2	1.6	1.6	2.1	1.6	1.6	2.6	2.1	0.5	1.0
15	95	74.7	76.8	7.4	9.5	7.4	3.1	4.2	2.1	3.1	2.1	1.0	2.1	...	1.0	2.1	3.1
16	63	80.9	82.5	6.4	9.5	6.4	4.8	1.6	...	1.6	...	1.6	...	1.6	1.6	...	1.6
17																	
18	14	78.6	78.6	14.3	7.1	...	...	...	7.1	...	...	7.1	7.1	...	...	...	...
19																	

Girls.

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8																	
9																	
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12																	
13	1	100.0	100.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	28	78.6	89.3	10.7	3.6	3.6	3.6	...	3.6	3.6	...	3.6	...	...	...	...	...
15	38	73.7	81.6	13.2	13.2	2.6	2.6	5.2	2.6	2.6	...	2.6	...	...	...	...	...
16	2	...	50.0	100.0	50.0	...	...	...	...	...	...	...	...	...	...	...	...
17																	
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19																	

TREATMENT OF SECONDARY SCHOOL CHILDREN.

It has been our experience that, in the majority of cases, parents readily provide the treatment required from private sources. There are, however, some instances where the parents are known to be too poor to provide treatment, and, for such cases, the Committee's Clinics have been made available for any treatment required. These Clinics are not always easily accessible owing to the circumstances of the Secondary

School being sometimes in the area of a Part III. Authority, and, therefore, the Committee has sanctioned the arrangement of treatment at the Clinics of Part III. Authorities on a basis of payment per case or per attendance. Up to the present such arrangements have been made with Ashton-under-Lyne, Darwen, Morecambe and Stretford, and it is anticipated that further arrangements will be made in due course with other Authorities as opportunity permits.

With respect to payment for treatment, the same procedure is followed as for elementary cases. For operations or for in-patient treatment under the Cripple Scheme the parents are assessed according to income, but no case is refused treatment of any kind on account of poverty.

The following tables show in summary form the amount, kind, and results of the treatment obtained during the year.

The first set of tables gives this information in regard to those pupils who were examined at the previous medical inspection ("new cases") :—

SECONDARY SCHOOLS.

TREATMENT OF DEFECTS.

NEW CASES.

Boys.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	1	...	1	1	1	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	2	...	2	2	2	...	...	...	...
Impetigo ...	6	2	4	6	6	...	...	...	...
Other Skin Disease ...	34	1	25	26	17	6	3	2	6
Ear Disease ...	32	1	21	22	10	8	4	5	5
Eye Disease (external and other)	26	3	15	18	14	3	1	1	7
Dental Disease ...	325	14	158	172	126	39	7	77	76
Other Diseases ...	101	10	67	77	34	34	9	11	13

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	1	...	1	1	1	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	1	...	1	1	1	...	...	...	...
Impetigo ...	...	...	...	...	...	...	...	...	...
Other Skin Disease ...	22	...	22	22	13	7	2	...	...
Ear Disease ...	47	...	37	37	15	19	3	1	9
Eye Disease (external and other)	15	...	11	11	8	3	...	1	3
Dental Disease ...	423	13	269	282	149	119	14	49	92
Other Diseases ...	200	3	159	162	76	80	6	4	34

TREATMENT OF VISUAL DEFECT.

	NUMBER OF PUPILS.													
	Referred for Refraction.	Submitted to Refraction.				Result of Refraction.							Not Re- fracted.	No Inform- ation.
		Under Author- ity's Scheme— Clinic, or Hospital.	By Private Prac- titioner or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner, Hospital or otherwise.		Treatment other than by Glasses.		For whom no treat- ment was con- sidered neces- sary.		
						Glasses Pre- scribed.	Glasses Ob- tained.	Glasses Pre- scribed.	Glasses Ob- tained.	Recom- mended.	Re- ceived.			
Boys	348	90	97	68	255	99	98	143	139	3	3	10	44	49
Girls	470	124	144	120	388	67	31	292	*232	16	16	13	25	57

* 31 girls who were prescribed glasses at School Clinics obtained them from private opticians.

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.						
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Untreated.	No Information
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
Boys	54	5	12	17	6	24	7
Girls	134	14	43	57	50	10	17

TECHNICAL AND CONTINUATION SCHOOLS.

TREATMENT OF DEFECTS.

NEW CASES.

Boys.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.				No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Improved.	Un-changed.	Un-treated.	
Minor Ailments (Skin)—									
Ringworm—Scalp ...	...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	...	...	...	...	...	...	...	...	...
Impetigo ...	2	...	2	2	2	...	...	...	...
Other Skin Disease ...	1	...	1	1	1	...	...	...	...
Ear Disease ...	4	...	1	1	1	...	...	1	2
Eye Disease (external and other)	5	1	4	5	5	...	...	...	...
Dental Disease ...	31	...	6	6	6	...	...	9	16
Other Diseases ...	13	5	2	7	1	6	...	3	3

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	...	...	...	...	...	...	...	...	...
Impetigo ...	...	...	...	...	...	...	...	...	...
Other Skin Diseases ...	1	...	1	1	...	1	...	...	...
Ear Disease ...	2	...	2	2	1	1	...	...	...
Eye Disease (external and other)	...	...	...	...	...	...	...	...	...
Dental Disease ...	43	1	19	20	10	10	...	15	8
Other Diseases ...	18	1	15	16	8	6	2	1	1

TREATMENT OF VISUAL DEFECT.

NUMBER OF PUPILS.														
Referred for Refraction.	Submitted to Refraction.					Result of Refraction.							Not Re- fracted.	No informa- tion.
	Under Authority's Scheme— Clinic or Hospital.	By Private Prac- titioner, or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner, Hospital, or otherwise.		Treatment other than by Glasses.		For whom no treat- ment was con- sidered neces- sary.			
					Glasses Pre- scribed	Glasses Ob- tained	Glasses Pre- scribed	Glasses Ob- tained.	Recom- mended.	Re- ceived.				
Boys	24	9	2	2	13	7	7	4	4	...	...	2	6	5
Girls	8	4	...	1	5	1	1	4	4	...	...	...	...	3

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.						
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Un-treated.	No information.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
Boys	6	2	1	3	...	1	2
Girls	11	6	2	8	1	...	2

The following set of tables gives similar information in regard to those pupils who were recommended to obtain treatment at some inspection prior to the last ("old cases") :—

SECONDARY SCHOOLS.

TREATMENT OF DEFECTS.

OLD CASES.

Boys.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	...	...	...	...	...	...	...	...	...
Impetigo ...	...	...	...	...	...	...	...	...	...
Other Skin Disease ...	6	...	5	5	2	3	...	...	1
Ear Disease ...	21	1	9	10	7	1	2	5	6
Eye Disease (external and other)	1	...	1	1	1	...	...	...	...
Dental Disease ...	82	3	36	39	15	22	2	28	15
Other Diseases ...	11	3	3	6	1	3	2	2	3

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Un-treated.	No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	...	...	...	...	...	...	...	...	...
Impetigo ...	...	...	...	...	...	...	...	...	...
Other Skin Disease ...	...	...	...	...	...	...	...	...	...
Ear Disease ...	...	...	...	...	...	...	...	...	...
Eye Disease (external and other)	...	...	...	...	...	...	...	...	...
Dental Disease ...	73	3	36	39	24	10	5	7	27
Other Diseases ...	17	...	12	12	2	10	...	1	4

NUMBER OF PUPILS.															
	Referred for Refraction.	Submitted to Refraction.				Result of Refraction.							Not Re- fracted.	No Inform- ation.	
		Under Author- ity's Scheme— Clinic or Hospital.	By Private Prac- titioner or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner, Hospital, or otherwise.		Treatment other than by Glasses.		For whom no treat- ment was con- sidered neces- sary.			
						Glasses Pre- scribed.	Glasses Ob- tained.	Glasses Pre- scribed.	Glasses Ob- tained.	Recom- mended.	Re- ceived.				
Boys	41	4	7	10	21	4	4	17	17	...	...	...	11	9
Girls	28	6	6	3	15	4	2	10	9	...	...	1	2	11

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.						
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Un-treated.	No Information.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
Boys	15	...	4	4	1	8	2
Girls	36	1	7	8	13	4	11

TECHNICAL AND CONTINUATION SCHOOLS.

TREATMENT OF DEFECTS.

OLD CASES.

Boys.

[illegible]

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.								
	Referred for Treatment.	Treated.			Result.			Untreated.	No Information.
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Improved.	Un-changed.		
Minor Ailments (Skin)—									
Ringworm—Scalp ...	...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...	...
Scabies ...	...	...	...	...	...	...	...	...	...
Impetigo ...	...	...	...	...	...	...	...	...	...
Other Skin Disease ...	...	...	...	...	...	...	...	...	...
Ear Disease ...	1	...	...	...	...	...	...	...	1
Eye Disease (external and other)	...	...	...	...	...	...	...	...	...
Dental Disease ...	11	...	1	1	1	...	...	...	10
Other Diseases ...	2	...	...	...	...	...	...	...	2

TREATMENT OF VISUAL DEFECT.

NUMBER OF PUPILS.														
Referred for Refraction.	Submitted to Refraction.					Result of Refraction.							Not Re- fracted.	No infor- mation.
	Under Authority's Scheme— Clinic or Hospital.	By Private Prac- titioner or Hospital.	Other- wise.	Total.	Under Authority's Scheme— Clinic or Hospital		By Private Practitioner, Hospital, or otherwise.		Treatment other than by Glasses.		For whom no treat- ment was con- sidered neces- sary.			
					Glasses Pre- scribed	Glasses Ob- tained.	Glasses Pre- scribed	Glasses Ob- tained.	Recom- mended.	Re- ceived.				
Boys	3	1	...	1	2	1	1	1	1	...	...	...	...	1
Girls	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.						
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.	Untreated.	No Information.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.			
Boys	1	1	...	1	...	...	...
Girls	...	...	...	...	...	...	...

MISCELLANEOUS.

Special attention is directed to the examination of Bursars in Secondary Schools. During the past year 385 Bursars and 426 candidates for Bursaries were medically examined.

A number of lectures, in many cases arranged in conjunction with Miss Tipper, the organizing lecturer employed by the Public Health Department, have been given to parents, mothers, members of Women's Institutes, Mothers' Unions, &c., during the year.

Lectures, illustrated by suitable films and lantern slides, have been given by members of the School Medical and Dental Staff, and Miss Tipper, to large numbers of children on such subjects as Personal Hygiene, Cleanliness, Care of the Teeth, &c., in many of the districts.

Various courses of lectures to Midwives have been given by members of the Medical Staff.

COALFIELDS DISTRESS FUNDS.—CAMPS FOR SCHOOL CHILDREN.

The Director of Education presents the following Report:—

Camps for the children of distressed miners were organized by the Authorities of the Coalfields Distress Funds during September at Birkdale and Conway. Sixty children and three teachers from Aspull and Abram districts spent a fortnight at the Birkdale Camp from September 5th to September 19th, and sixty children and three teachers attended from September 19th to October 3rd.

Two hundred and fifty children and 17 teachers attended the camp at Conway for the period August 29th to September 12th, and 237 children and 17 teachers attended the same camp for the period September 12th to September 26th.

The places in the Camp are allocated to the various districts in the County Area by the Coalfields Distress Funds Committee, but the selection of the children is left to the Local Committees of the districts concerned.

The Conway Camp is held at the Morfa Centre, Conway, of the Holiday Fellowship Society, and the children are accommodated in wooden huts with the supervising teachers in separate cubicles. There is a common room equipped with a piano and suitable pictures, Canteen, Dining Hut for boys and girls separately and a Cookhouse which divides the boys' section of the Camp from the girls. A separate mess is provided for the teachers.

The site of the Camp is a large sandy stretch of land on the Conway Estuary, the Camp itself being protected from the drifting sand by palisading. Football and other games can be played on adjoining land and bathing takes place from a good shingle beach. The Camp is situated about ten minutes' walk from Conway Castle, and daily visits are organized to the Castle, neighbouring hills and places of interest in the district.

The Camp routine was similar to that of last year, starting at 7 o'clock with reveillé, breakfast at 8 o'clock, lunch at 1 p.m., tea at 5 p.m., lights out at 8 p.m. The domestic arrangements are managed by a regular staff, and good substantial meals are provided. Entertainments are organized during the evening. The Camp Authorities provide everything with the exception of clothing and sports wear.

A number of reports have been received from teachers as to the very enjoyable time spent at the Camp.

The School Medical Department again arranged for one of their nurses to be in attendance during the whole period of the Camp, and her services were of great value.

The reports submitted all refer to the healthier look of the children at the end of their stay in Camp.

SPECIAL INQUIRIES.

Dr. R. J. Batty has written the following paper on Enuresis among School Children :—

ENURESIS.

Enuresis or bed-wetting is a fairly common complaint among school children in certain parts of Districts 3 and 4, and it is a source of considerable worry both to the teacher and the parents of the patient. In some schools more than 5 per cent. of the children are affected with this complaint, which is sometimes regarded as so trivial that the mother is told not to worry as the child will grow out of it. Unfortunately this prognosis is justified in only a small percentage of cases which remain untreated, and I was impressed by the large number of cases where the complaint had been established for a number of years. Not infrequently it persists into adult life and seriously restricts the adolescent's chances of employment.

The subject seemed to be of sufficient importance to justify a detailed investigation, the results of which are appended.

CAUSATION.—The following causative factors were considered :—

- (i.) Heredity.
- (ii.) Sex.
- (iii.) Age incidence in relation to sex.
- (iv.) Locality.
- (v.) Seasonal variation.
- (vi.) Influence of co-existing defects.

Records of over 150 cases were made in the two years occupied by the investigation but, for statistical purposes, attention has been concentrated on the first 75 consecutive patients. With most of these 75 cases more than six months have elapsed since the completion of treatment, and a more reliable estimate of its value can therefore be obtained.

HEREDITY.—In over a third (37 per cent.) of my cases there was a history of bed-wetting in one of the parents of the patient, while in more than half (51 per cent.) of the cases a brother or sister of the patient was also affected by the same complaint. In three cases even grandparents and one great-grandparent were quoted as having had this defect all their lives.

SEX.—Of the 150 cases, 44 per cent. were boys and 56 per cent. were girls, but other investigators of larger numbers of cases find the sexes equally affected. This seems to indicate that the common cause of this affection will not be found in any anatomical peculiarity external to the bladder sphincter.

AGE INCIDENCE IN RELATION TO SEX.—In both sexes the majority (69 per cent.) of my patients have had the complaint from infancy.

LOCALITY.—The vast majority of the cases occurred in the port of Fleetwood and in the small agricultural village of Preesall, which stand on opposite banks of the River Wyre at its mouth. In the small inland towns and villages of the Over Wyre district the complaint is very uncommon. The most likely explanation of the concentration of cases in these two towns is the unusual prevalence of Threadworm infection and also Tonsils and Adenoids among the inhabitants of this area (a point which is discussed later).

SEASONAL VARIATION.—The majority (69 per cent.) were much worse in the winter. Very few writers mention this seasonal variation, but it is of considerable importance when assessing the value of any particular form of treatment. Many supposed cures are merely the natural amelioration of the condition which takes place in warm weather, even when no treatment is adopted.

INFLUENCE OF CO-EXISTING DEFECTS.—The most important factors are lack of training in infancy combined with bad home conditions.

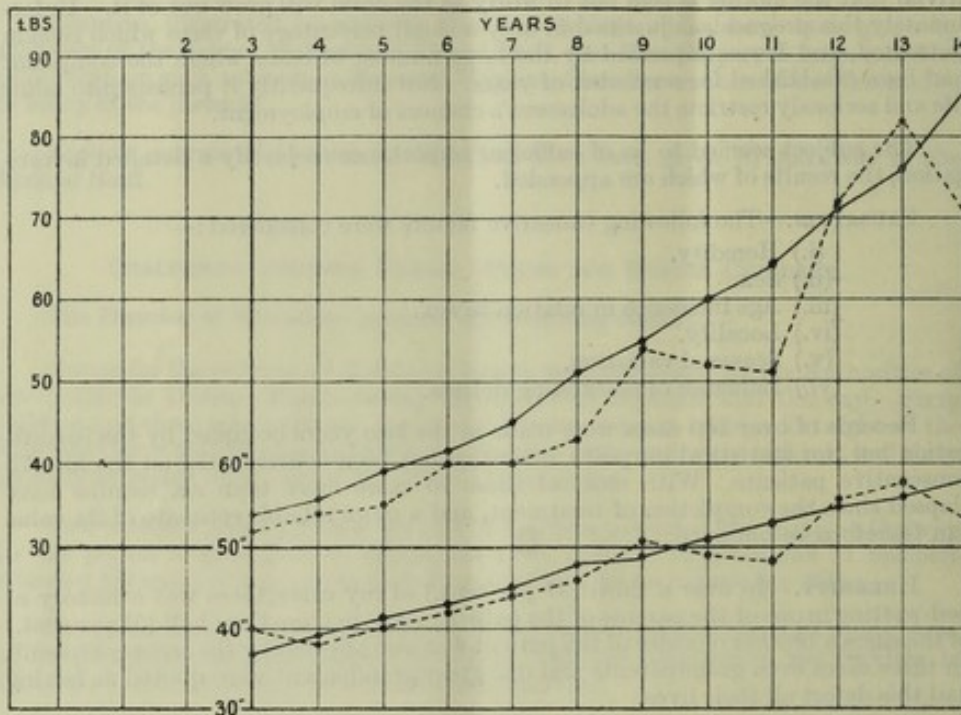
Every patient was first subjected to a thorough routine medical inspection, including an examination of the urine. In 90 per cent. of the patients some associated physical defect was found, but the only defects of importance in this connection were (in order of frequency) :—

- Tonsils and Adenoids.
- Threadworms.
- Malnutrition.
- Mental Deficiency.
- Epilepsy.

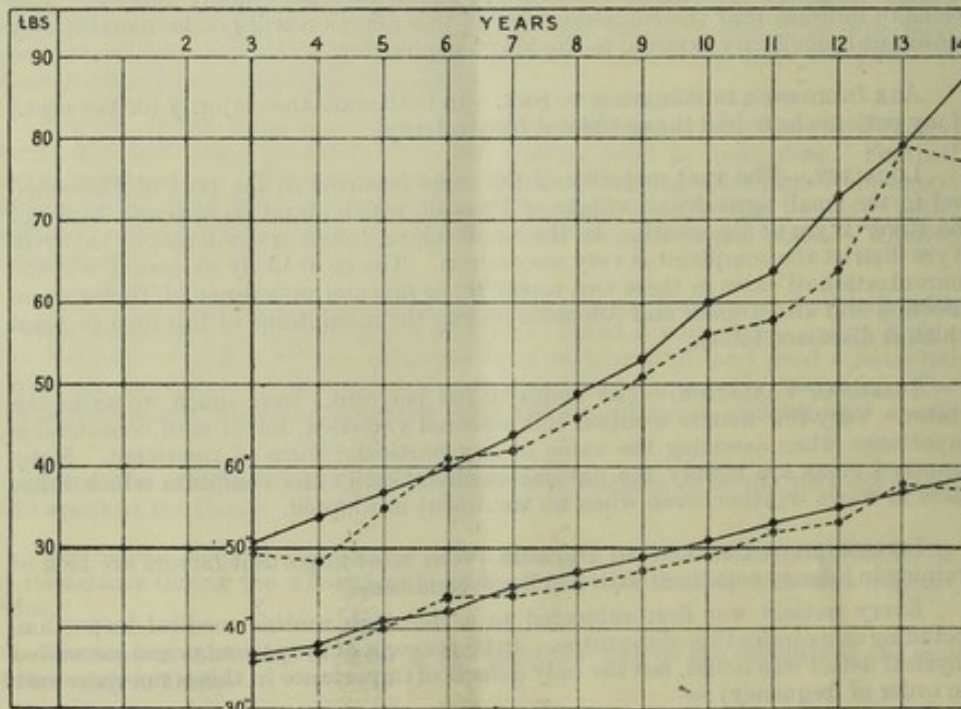
No fewer than 73 per cent. of all cases have either Tonsils and Adenoids or Threadworms. Malnutrition has the same pre-disposing causes as enuresis (*viz.*, chronic fatigue, ill-balanced diet and overcrowding at night), but it cannot itself be regarded as a causal factor. Unsuitable articles of diet and excessive drinking in the evening are important pre-disposing causes of bed-wetting.

The graph which follows shows the average heights and weights of my enuresis cases compared with mean heights and weights of 24,000 English school children.

BOYS



GIRLS



The upper line shows weights. The lower line shows heights.
 Height and weight of average children shown thus ———
 Height and weight of enuretic children shown thus - - - - -

Only one-half of the cases could be regarded as of normal intelligence, 39 per cent. were dull and backward, another 7 per cent. were mentally defective, and only 4 per cent. were described by their teacher as very intelligent. With regard to general behaviour, the restless, fidgety type of patient predominates.

Overcrowding plays an important part, 59 per cent. of the cases coming from homes which could definitely be classed as bad.

Other associated defects are interesting chiefly on account of their rarity. An uncommon but interesting cause of bed-wetting is a persistent reversal of the normal concentration of urine. The normal person passes about double the quantity of urine during the day compared with the amount secreted during the night. In a few bedwetters, however, the nocturnal urine is of low specific gravity and accumulates in larger quantity than the day urine (which is scanty and of high specific gravity). For instance, one patient passed only 5 ounces of urine (with a S.G. of 1030) during the day-time, but voided 25 ounces (with a S.G. of 1020) during the succeeding night. This test was made three times at intervals of a week to make certain that the reversal of concentration was not a transient phenomenon. Such cases are extremely difficult to cure; the flood of urine which enters the bladder at night makes bed-wetting inevitable.

Bacillus coli infection of the urine was found in three cases only—all girls. Another patient had pyelitis and necrosis of one kidney, which was subsequently removed by operation at the Victoria Hospital, Blackpool. Only two cases had albuminuria of any serious significance, one being the case of pyelitis already mentioned.

Serious anatomical defects are very rare among bed-wetters, only one case of spina bifida occulta being found. Aberrant ureter is a very rare cause of enuresis in girls and I have not seen a single case. Minor defects, such as phimosis and undescended testicle, are much more common among bed-wetters when compared with normal children.

Pollakiuria (*i.e.*, frequency and urgency) is commonly associated with enuresis. The enuresis usually responds first to treatment, but it will invariably recur unless the frequency and urgency are also treated until they subside.

The majority of patients are wet during the night only, while but a small minority are wet during the day-time and dry at night. The exact proportion among my patients was:—

Enuresis both night and day.		Enuresis at night only.		Enuresis during day only.
40 per cent.	...	49 per cent.	...	11 per cent.

Eight per cent. of my cases also had faecal incontinence, but this lack of bowel control is much easier to cure and usually disappears long before the enuresis can be cured.

Deep sleep is common among bed-wetters and they are not easily awakened for compulsory urination when the parents retire for the night. Dreams of urination, "nightmare" and dreams of sea voyages are common in these children. The commonest time for the actual bed-wetting to take place is about 10 p.m. and again at 5 a.m. (often just at the moment of wakening).

TREATMENT.—Education is of the utmost importance; everything else is only auxiliary treatment.

The usual methods of education—to teach the child to empty its bladder at meal times, at playtime, before going to bed and also immediately it awakens—are too well-known to need further elaboration. But the child should also be wakened for urination about 10 p.m. each night, and also as soon as the parents rise each morning. The important point is that this training should start quite early in the life of the infant—certainly not later than the first year.

Before any specific drug treatment is started, all co-existing defects should be put right if possible. In 21 cases I was able to get the patients to undergo an operation for removal of Tonsils and Adenoids, and in seven cases this measure alone cured the bed-wetting. This gives an operative cure rate of only 33 per cent., but this proportion compares favourably with the results obtained by the usual popular remedies.

Of drug treatment, anthelmintics form the most successful remedy. Thread-worms are a prolific cause of bed-wetting, and it is impossible to cure enuresis in such

patients until the worms have been eradicated. I have found BUTOLAN (Bayer), i.e., P-oxy-diphenyl-methane-carbaminic, the most effective anthelmintic. It is put up in the form of $7\frac{1}{2}$ grain tablets. Half a tablet three times a day after meals is sufficient for most children and results in copious evacuations of threadworms in the stools. It should be combined with a simple purge given every other night and followed by a saline enema the next morning. Frequently it will be found that the whole family is infected with worms, although only the one patient has enuresis as well. Hence, every member of the family should have the stools examined for the presence of worms and treatment must be carried out where necessary. Failure to do this will only lead to eventual disappointment at frequent relapses in the original enuretic patient in the family, through re-infection with worms.

During the past hundred years, Belladonna has had the reputation of being a specific in enuresis. The usual advice given is to push the dosage until the child is on the verge of Belladonna poisoning. Such treatment, however, only makes the misery of the little bed-wetter more acute. A child with dilated pupils cannot study and will have an unhappy time at school while undergoing intensive Belladonna treatment. Further, if any co-existing defects (worms, for example) have not been put right a relapse into bed-wetting is certain as soon as the Belladonna is withdrawn. Moderate doses of Belladonna act equally well, in my experience, if given over a prolonged period in purely functional cases without co-existing defects.

Space does not admit of a description of every other drug which has been tried.

With regard to psycho-therapeutic methods, simple suggestion acts best of all when removal of co-existing defects has failed to cure. It is the quickest and cheapest of all methods of treatment. The results are usually dramatic, and the gratitude of the parent is correspondingly great.

The results of treatment of the first 75 cases are given below :—

Treatment by.	Percentage of total number treated.
Training only	31
Anthelmintic	16
Tonsils and Adenoid operation	9
Suggestion	8
Belladonna	5
Circumcision	3
Belladonna and Pot. Bromide	4
Potassium Bromide alone	1
Pot. Brom. and Luminal	1
Removal of diseased kidney	1
Total successfully treated	80 per cent.

The above successes include three mentally defective children and two epileptics. It is obvious, of course, that all this treatment was not carried out at the school clinic, but the preliminary investigation of every case was made there. Where necessary, the child was referred to its own private doctor for special treatment, although the majority of the patients were treated at this clinic. Many unsuspected defects of some gravity were discovered when the mother brought the child to the school clinic with the sole complaint of bed-wetting, which I think justifies the time and trouble involved.

No patient was considered "cured" until he had had full bladder control for at least six months. The use of the word "improved" with reference to this complaint, is to be deprecated. If the patient cannot recover full bladder control, the case should be regarded as a failure.

Of the failures the following reasons were obtained :—

	Percentage of total number treated.
Refused all treatment or ceased to attend	11
Bad mental defect	3
Hopeless home conditions	4
Persistent worm infection	1
Persistent reversal of urinary concentration	1
Total failures	20 per cent.

I am convinced that enuresis is curable in the great majority of cases, but it should not be left to cure itself with the slow passing of years.

Dr. W. C. V. Brothwood contributes the following interesting account of Hereditary Optic Atrophy as it occurred in a family :—

HEREDITARY OPTIC ATROPHY.

The pedigree includes five generations, but only certain members of the third, fourth and fifth were seen. Information given about the first and second generations, however, appears to be quite reliable and was derived from several sources. There was no consanguinity.

The table shows seven members affected by Hereditary Optic Atrophy. Six of these were examined. In addition iv. M.6 and M.7—the unaffected brothers of iv. M.5. were investigated ; ii. M.2 was not examined.

The cases are so similar that no useful purpose would be attained by a separate description of each. They are, therefore, grouped together and described together under various headings. But where an individual shows some striking divergence from what appears to be the "normal" behaviour, a note is made.

OCCUPATION AT TIME OF ONSET.

All worked in a mill. Two were weavers, two loomers and drawers, one was a mule-spinner, and there was one oiler.

HABITS.

Prior to the onset of the disease, all the affected members of the family smoked Twist tobacco, the amount varying from 4 ozs. to $\frac{1}{2}$ -oz. weekly.

Inquiry into the amount of alcohol taken was not pushed too far. All that can be said is that some of the affected members did, and still do, take alcohol.

In no case was there a history of a previous illness which could possibly cause any predisposition to an attack.

BLOOD PRESSURE.

The B.P. was rather above normal.

WASSERMANN REACTION.

This was negative in the only five cases in which it was taken.

AGE AT ONSET.

With the exception of one individual, iii. M.2, the onset occurred before the age of 30 years. The ages were 24, 58, 27, 28, 19 and 25 ; 25 was the age at which iv. M.5 started, therefore, it cannot be said that there is any ante-dating.

TYPE OF ONSET.

Except in one case (again iii. M.2) the onset was fairly sudden and the maximum disability in the longest was reached in a few weeks ; iii. M.3 says his sight went "almost in a night" ; iv. M.5 says "in four or five days."

iii. M.2 says it took six months for his eyes to reach their present state, and that previous to the onset he was short-sighted.

SIGNS AND SYMPTOMS.

There was considerable diminution in visual acuity. The best vision was that of iii. M.3, who had a bilateral $1/36$ Snellen. Three others could only recognise fingers at a distance of under one yard.

Central scotoma was prominent. Not one could read a newspaper or do any fine work. Mobility, however, was very good. In all cases the eyes reacted to light and accommodation. In two cases iii. M.1 and iv. M.5 vision is diminished in a strong light. None of the affected members could distinguish colours.

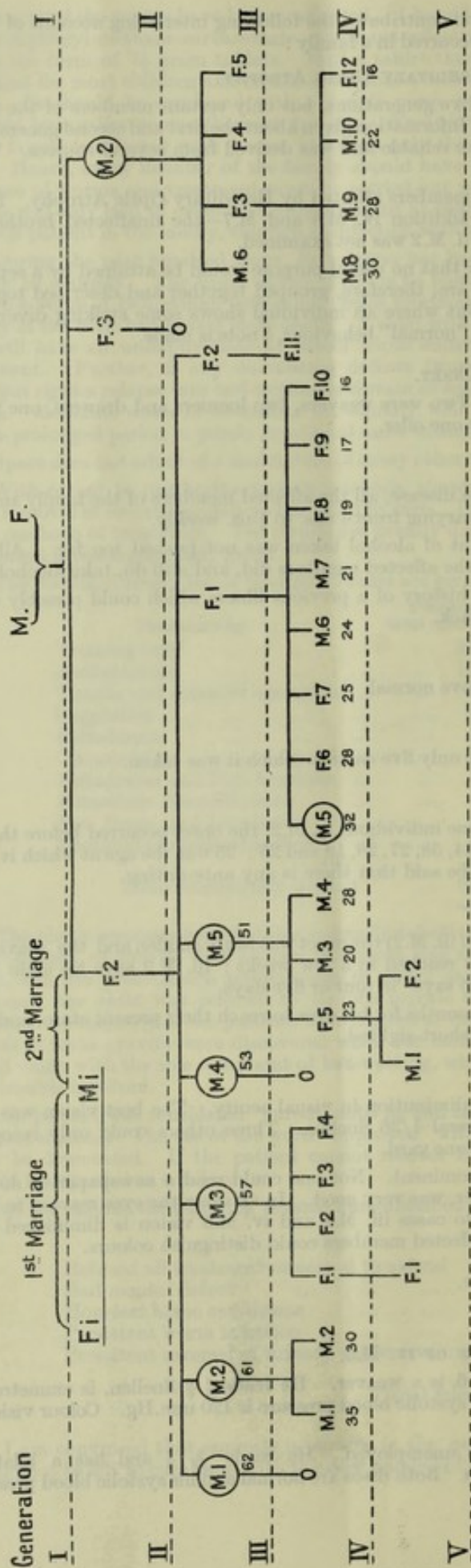
ANY ASSOCIATED CONDITION.

None was observed.

TWO UNAFFECTED BROTHERS OF IV. M.5.

The elder of these iv. M.6. is a weaver. He reads $\frac{6}{24}$ Snellen, is emmetropic, his fundi are normal, and his systolic blood pressure is 120 mm.Hg. Colour vision is normal.

The younger iv. M.7 is unemployed. He reads $\frac{6}{18}$ and has a bilateral refractive error of -0.5 D.Sph. Both discs are normal and his systolic blood pressure is 116 mm.Hg.



It is seen that II M.1. married twice. The children of his first marriage and their offspring are all normal.

SOME ASPECTS OF THE DISEASE.

It is certain that the condition is hereditary and, so far as this pedigree goes, is sex-limited. Observation on the collateral branch—the offspring of ii. M.2 during the next few years will be interesting.

A feature of the disease is that young adults, at a time when they are at the height of their physical efficiency, are more or less suddenly smitten without any previous warning, and without any apparent cause.

In view of the relative suddenness of the onset it seems that there must be some precipitating agent which sets the hereditary factor in motion. It is possible that this agent is tobacco. An important point, however, is that in those cases where cessation of the tobacco habit was tried there was no amelioration of the condition, nor did the disease cease to progress. It may be that the hereditary recessive factor does not need a prolonged stimulus for it to be permanently expressed.

It has been suggested by Sir Wm. Gowers that the condition is abiotrophic. He says that there is an inherent defect of vitality, that the structures grow and develop normally and then a lack of vital endurance causes a breakdown of function.

Against this view is the fact that iii. M.3 says that his sight went “almost in a night,” and further, that there has actually been some improvement in vision. Moreover, iii. M.2 was not affected till he reached the age of 58. His visual acuity had been sufficient to carry him through the most strenuous years of life.

SEX INCIDENCE AND MODE OF TRANSMISSION.

Julia Bell has summarised all the literature on Hereditary Optic Atrophy. Commenting on the table given below, she says “It is not permissible, even by the European standard to speak of hereditary optic atrophy as a sex-limited disease.”

	Males.	Females.	Male Sex Incidence.
European Population ...	863	155	84.8 ± 0.8
Japanese Population ...	97	67	59.1 ± 2.6

Discussing the hereditary character of the disease and its mode of transmission, she says that of 573 affected males no fewer than 95 per cent. owe the affection to their mother, and of 88 females 84 per cent. obtain the affection through their mother.

Thus the disease does not always breed true. Particularly is this so among the Japanese.

THE SIGNIFICANCE OF THE PEDIGREE.

It is evident from this pedigree of five generations that the disease can breed true; that is, the females act as carriers and transmit the disease to their male offspring. The condition can be “carried” through three generations of females and become manifest in a male of the fourth generation. In this pedigree, there is, as yet, no evidence that an affected male can transmit the disease to his offspring.

APPENDIX.

STATISTICAL TABLES IN RESPECT OF THE ROUTINE
INSPECTION OF ELEMENTARY SCHOOLS CARRIED
OUT DURING THE YEAR ENDED 31st DECEMBER,
1931.

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

A.—Routine Medical Inspections.

Number of Code Group Inspections—				
Entrants	...	...	...	12,782
Intermediates	...	...	...	13,199
Leavers	...	...	...	10,298
Total	...	...	...	36,279
Number of other Routine Inspections				—

B.—Other Inspections.

Number of Special Inspections	...	...	...	29,898
Number of Re-inspections	...	...	...	43,217
Total	...	...	...	73,115

TABLE II.

A.—RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL
INSPECTION IN 1931.

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.
Malnutrition				109	428	94	348
Skin.	{	Ringworm—					
		Scalp	20	...	13	...	
		Body	27	2	7	...	
		Scabies	28	2	13	1	
		Impetigo	280	41	101	17	
Other Diseases (Non-Tubercular)				295	208	97	64
Eye.	{	Blepharitis	304	156	91	72	
		Conjunctivitis	62	189	25	91	
		Keratitis	2	...	5	1	
		Corneal Opacities	5	26	...	8	
		Defective Vision	1,637	1,961	817	693	
		Squint	236	319	77	130	
Other Conditions				2	1	2	3
Ear.	{	Defective Hearing	75	113	28	43	
		Otitis Media	194	34	98	28	
		Other Ear Diseases	179	55	20	7	
Nose and Throat.	{	Enlarged Tonsils	648	4,260	177	740	
		Adenoids	89	281	35	69	
		Enlarged Tonsils & Adenoids	491	578	258	239	
		Other Conditions ... ..	...	...	...	...
Enlarged Cervical Glands (Non-Tubercular)				29	2,894	7	495

TABLE II.—Continued.

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.
Defective Speech				9	144	4	63
Teeth—Dental Diseases				4,124	2,327	604	545
Heart and Circulation	{ Heart Disease—						
	{ Organic			14	206	4	75
	{ Functional ... ..			...	976	...	403
	{ Anæmia			56	141	22	48
Lungs.	{ Bronchitis			210	691	46	166
	{ Other Non-Tubercular Diseases			27	116	11	25
Tuberculosis.	{ Pulmonary—						
	{ Definite			1	...	...	1
	{ Suspected			4	8	4	4
	{ Non-Pulmonary—						
	{ Glands			18	21	7	14
	{ Spine ... ..			...	2	...	...
	{ Hip			1	4	...	1
	{ Other Bones and Joints			2	6	1	...
	{ Skin			6	7	2	2
	{ Other Forms ... ..			...	...	...	...
Nervous System.	{ Epilepsy			2	9	2	12
	{ Chorea			7	16	5	20
	{ Other Conditions			17	18	5	11
Deformities	{ Rickets			24	200	5	134
	{ Spinal Curvature			26	71	8	33
	{ Other Forms			256	593	106	138
Other Defects and Diseases				319	651	126	161

B.—NO. OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

GROUP.	NUMBER OF CHILDREN.		Percentage of children found to require Treatment.
	Inspected.	Found to require Treatment.	
Code Groups—			
Entrants	12,782	1,059	8.28
Intermediates	13,199	1,540	11.66
Leavers	10,298	1,467	14.24
Total (Code Groups)...	36,279	4,066	11.20
Other routine inspections ...	...	...	...

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN
IN THE AREA IN 1931.

			Boys.	Girls.	Total.
Children suffering from the following types of Multiple Defect, i.e., any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling, or Heart Disease			71	39	110
*(See Table III. (a) for actual combination of defects, etc.)					
Blind (including partially blind)	(i.) Suitable for training in a School or Class for the totally blind	Attending Certified Schools or Classes for the Blind ...	10	16	26
		Attending Public Elementary Schools ... ..	...	...	...
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	2	1	3
	(ii.) Suitable for training in a School or Class for the partially blind	Attending Certified Schools or Classes for the Blind ...	29	16	45
		Attending Public Elementary Schools	17	15	32
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	2	4	6
Deaf (including deaf and dumb and partially deaf)	(i.) Suitable for training in a School or Class for the totally deaf or deaf and dumb	Attending Certified Schools or Classes for the Deaf... ..	26	21	47
		Attending Public Elementary Schools ... ..	...	...	...
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	2	5	7
	(ii.) Suitable for training in a School or Class for the partially deaf	Attending Certified Schools or Classes for the Deaf... ..	10	15	25
		Attending Public Elementary Schools	23	14	37
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	1	1	2
Mentally Defective	Feeble-minded (cases not notifiable to the Local Control Authority)	Attending Certified Schools for Mentally Defective Children	8	4	12
		Attending Public Elementary Schools	195	136	331
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	40	19	59
	Notified to the Local Control Authority during the year ...		23	14	37
Epileptics	Suffering from severe epilepsy	Attending Certified Special Schools for Epileptics ...	8	6	14
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		Attending Public Elementary Schools	7	7	14
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	10	9	19
		Attending Public Elementary Schools	83	49	132
		At no School or Institution ...	9	4	13

TABLE III.—Continued.

			Boys.	Girls.	Total.
Physically Defective	Active pulmonary tuberculosis (including pleura and intrathoracic glands)	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board... ..	...	...	...
		At Certified Resident Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	2	5	7
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	2	3	5
	Quiescent or arrested pulmonary tuberculosis (including pleura and intrathoracic glands)	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	14	17	31
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	3	5	8
	Tuberculosis of the peripheral glands	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	52	50	102
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	8	2	10
	Abdominal tuberculosis	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	8	3	11
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	...	...	...
	Tuberculosis of bones and joints (not including deformities due to old tuberculosis)	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board ... ..	...	...	...
		At Public Elementary Schools	27	17	44
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	12	15	27
	Tuberculosis of other organs (skin, etc.)	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board... ..	...	...	...
		At Public Elementary Schools	9	8	17
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	1	1	2

			Boys.	Girls.	Total.
Physically Defective (<i>contd.</i>)	Delicate Children <i>i.e.</i> , all children (except those included in other groups) whose general health renders it desirable that they should be specially selected for admission to an Open Air School	At Certified Residential Cripple Schools ... ..	...	...	...
		At Certified Day Cripple Schools ... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	170	158	328
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	19	16	35
	Crippled Children (other than those with active tuberculous disease) who are suffering from a degree of crippling sufficiently severe to interfere materially with a child's normal mode of life	At Certified Hospital Schools ...	39	29	68
		At Certified Residential Cripple Schools ... ..	...	...	...
		At Certified Day Cripple Schools ... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	344	315	659
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	35	34	69
	Children with heart disease, <i>i.e.</i> , children whose defect is so severe as to necessitate the provision of educational facilities other than those of the public Elementary School	At Certified Hospital Schools ...	...	...	...
		At Certified Residential Cripple Schools ... ..	...	...	...
		At Certified Day Cripple Schools ... ..	...	...	...
		At Certified Residential Open Air Schools ... ..	...	...	...
		At Certified Day Open Air Schools ... ..	...	...	...
		At Public Elementary Schools	31	48	79
		At other Institutions ... ..	...	...	...
		At no School or Institution ...	3	15	18

TABLE IIIA.—COMBINATION OF MULTIPLE DEFECTS.

Combination of Defects.	Boys.		Girls.		Total.
	Not at School	At Elementary or Special School or Institution.	Not at School	At Elementary or Special School or Institution.	
Total Blindness and Total Deafness	1	...	...	...	1
Total Blindness and Mental Defect	5	...	2	...	7
Total Blindness and Epilepsy ...	...	...	1	...	1
Total Blindness, Mental Defect and Epilepsy	1	...	...	...	1
Total Blindness, Mental Defect and Crippling... ..	1	...	...	...	1
Total Deafness and Mental Defect	1	...	1	1 (Instn.)	3
Total Deafness and Epilepsy ...	...	...	1	...	1
Total Deafness and Crippling ...	1	1 (S.S.)	1	...	3
Total Deafness and Heart Disease	...	...	...	1 (E.S.)	1
Mental Defect and Epilepsy ...	9	1 (E.S.)	6	1 (E.S.)	17
Mental Defect and Active Tuberculosis	1	...	...	...	1
Mental Defect and Crippling ...	26	7 (E.S.)	13	2 (E.S.)	48
Mental Defect and Heart Disease ...	2	1 (E.S.)	2	1 (E.S.)	6
Mental Defect, Epilepsy and Crippling... ..	1	...	1	1 (E.S.)	3
Epilepsy and Crippling	1	2 (E.S.)	...	1 (E.S.)	4
Epilepsy, Active Tuberculosis and Crippling... ..	...	1 (Instn.)	...	...	1
Active Tuberculosis and Crippling...	4	...	...	...	4
Active Tuberculosis and Heart Disease	2	...	1	...	3
Crippling and Heart Disease ...	...	2 (E.S.)	1	1 (E.S.)	4
	56	15	30	9	110

TABLE IV.—RETURN OF DEFECTS TREATED DURING 1931.

Group I.—Minor Ailments (excluding Uncleanliness).

DISEASE OR DEFECT.	No. of Defects treated or under Treatment during the year.		
	Under Authority's Scheme.	Otherwise.	Total.
Skin—			
Ringworm—Scalp	147	45	192
Ringworm—Body	149	24	173
Scabies	160	36	196
Impetigo	2172	274	2446
Other Skin Diseases	1182	225	1407
Minor Eye Defects	1405	256	1661
Minor Ear Defects	1154	303	1457
Miscellaneous (e.g., minor injuries, bruises, sores, chilblains, etc.).	5364	654	6018
Total	11733	1817	13550

Group II.—Defective Vision and Squint.

DEFECT OR DISEASE.	NO. OF DEFECTS DEALT WITH.			
	Under the Authority's Scheme.	By Private Practitioner or at Hospital.	Otherwise.	Total.
Errors of Refraction	5415	104	173	5692
Other Defect or Disease	199	...	...	199
Total	5614	104	173	5891

Total number of children for whom spectacles were prescribed :—

(a) Under the Authority's Scheme 4142

(b) Otherwise 223

Total number of children who obtained or received spectacles :—

(a) Under the Authority's Scheme 3707

(b) Otherwise 189

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.	By Private Practitioner or Hospital.	Total.		
2165	137	2302	158	2460

TABLE IV.—continued.

Group IV.—Dental Defects.

(1) No. of children who were :—

(a) Inspected by the Dentist—

Routine Age Groups	Age 5	...	6694	Total	...	44709
	Age 6	...	5840			
	Age 7	...	6214			
	Age 8	...	5686			
	Age 9	...	5350			
	Age 10	...	5339			
	Age 11	...	4135			
	Age 12	...	2729			
	Age 13	...	2278			
	Age 14	...	444			
Specials	...	...	...	...	...	4316
			Grand Total	...	...	49025
(b) Found to require treatment						38337
(c) Actually treated						26371

(b) Found to require treatment ... 38337
 (c) Actually treated ... 26371

(2) Half-days devoted to	{ Inspection ... 513 Treatment ... 4960 }	Total	...	5473
(3) Attendances made by children for treatment	...	...	...	44836
(4) Fillings	{ Permanent teeth ... 17865 Temporary teeth ... 3559 }	Total	...	21424
(5) Extractions	{ Permanent teeth ... 11163 Temporary teeth ... 55368 }	Total	...	66531
(6) Administrations of general anaesthetics for extractions	...	...	...	2613
(7) Other operations	{ Permanent teeth 9960 Temporary teeth 9568 }	Total	...	19528

Group V.—Uncleanliness and Verminous Conditions.

(1) Average No. of re-visits per school made during the year by the School Nurses	...	...	...	...	6.4
(2) Total No. of examinations of children in the Schools by School Nurses	...	...	...	...	193,346
(3) No. of children found unclean by Nurses at re-visits	...	...	...	...	8,957

