

[Report 1921] / Medical Officer of Health, Birkenhead County Borough.

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Publication/Creation

1921

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COUNTY BOROUGH OF BIRKENHEAD.



ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR
1921.

D. MORLEY MATHIESON. M.A., M.D. (Edin.), Ch.B., D.P.H.,

Medical Officer of Health, and
Principal Medical Officer for the Municipal Tuberculosis, Mental Deficiency,
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.

No.	
Class	B.C. V 145
Officer	H. G.

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SHORT STATISTICAL SUMMARY.

1921.

Area of Borough	3,909 acres, or a little over 6 square miles
Estimated population (at midsummer)	147,800
Number of persons per acre (density of population)	37.8
Estimated number of houses in Borough	27,146
Number of inhabited houses at time of census, 1911	24,343
Rateable value	£861,024
Birth-rate per thousand of the population	25.8
Death-rate ,, ,, ,,	11.6
Average death-rate for last ten years	14.4
Phthisis death-rate per thousand of the population	1.04
Infantile mortality rate (per 1,000 births)	75
Percentage of total deaths which were uncertified	0.11
Average number of children in elementary schools	24,643
Total children medically inspected during year	6,787

COMMITTEES.

The following was the constitution of the Health, Education, Mental Deficiency, and Maternity and Child Welfare Committees as on 31st December, 1921:—

Health Committee.—Mr. Councillor Dr. Dawson, chairman; Mr. Councillor Hoblyn, deputy-chairman; Alderman Byrne, Councillors Bishop, Gossage, Miss Hickey, Dr. Kidd, Miss Laird, Mrs. Mercer, Stephens, Tweedle and Woodin.

Education Committee.—Mr. Alderman Arkle, chairman; Mr. Alderman Russell, deputy-chairman; Aldermen Naylor, Procter and Solly, Councillors Collin, Chalmers, Fletcher, Miss Hickey, W. Jackson, Maddocks, Major, Merritt, Stott and White.

Non-Council Members: J. P. Eglen, Esq., Rev. Canon O'Toole, W. Garmon Jones, Esq., S. R. Williams, Esq., Mrs. M. A. Davis, Miss Annie A. Laird, W. H. Jones, Esq., J. H. Gibson, Esq., and C. J. Blair, Esq.

Mental Deficiency Committee.—Dr. John Noble, chairman; Mr. Alderman Gamlin, deputy-chairman; Aldermen Arkle, Curphey and Goodwin, Councillors Godsell, Merritt and Speed.

Non-Council Members: Mrs. E. C. Gossage, Mrs. E. S. Oakshott, Mrs. Van Gruisen, Miss Annie A. Laird and Henry Byrne, Esq.

Maternity and Child Welfare Committee.—Miss Councillor Laird, chairman; Mrs. Councillor Mercer, deputy-chairman; Aldermen Arkle and Russell, Councillors Austin, Bishop, Boston, Dr. Dawson, Gossage, Miss Hickey, Dr. Kidd and Tweedle.

Non-Council Members: Mrs. S. J. Beattie, Mrs. J. H. Beazley, Mrs. Bromfield, Mrs. Pollard, Mrs. E. Corkhill, and Dr. F. Johnston.

The Mayor (Mr. Councillor Lees) ex-officio a member of all ordinary Committees.

The Annual Report was submitted in May, 1921.

PREFACE.

The following report deals with the year ending 31st December, 1921.

This year has been notable in two important respects

(a) the death-rate for the year (11.6 per 1,000 of the population) is the lowest ever recorded for the Borough; the previous lowest rate having been 13.3 in 1920 and 1917.

(b) the infantile mortality rate was very much lower than that for any previous year—75 per 1,000 births; the next lowest being that recorded in 1917—95 per 1,000 births.

Reference to these rates will be found on pages 5 and 7.

The decennial census was taken in June, 1921; the Registrar-General's estimate of the mid-year population of the Borough, based on the census, was 147,800.

Thingwall Sanatorium was opened for the reception of patients suffering from tuberculosis in November. The possession of this institution will strengthen the hands of the Health Committee in their task of dealing with the problem of tuberculosis, of which disease there were 1,301 cases in the Borough at the end of the year.

A considerable amount of work was done during the year in connection with the Blind Persons Act, 1920, and a register of all blind persons in the Borough was prepared; but the Health Committee's scheme was not finally completed before the end of the year.

I am indebted to my colleagues in other departments, to the Clerk to the Guardians, to the Manager of the Birkenhead Employment Exchange, and to the General Manager of the Mersey Docks and Harbour Board for certain information included in the body of the report. I am glad also to have this opportunity of expressing my appreciation of the excellent work done by the staff during the past year.

D. M. M.

ADMINISTRATION.

General administrative arrangements.—The detailed arrangements made by the local authority for dealing with various branches of health work—*e.g.*, maternity and child welfare, tuberculosis, etc.—are set out in the appropriate sections of this report.

Staff.—The staff engaged on the work of the department consisted at the end of 1921 of the following:—

Medical Officer of Health and Principal Administrative Medical Officer:

D. MORLEY MATHIESON, M.A., M.D. (Edin.), D.P.H.

Assistant Medical Officers (whole time):

H. MASON LEETE, M.D., B.S., B.Hy., D.P.H. (Tuberculosis).

F. G. FOSTER, M.A., M.B., Ch.B., D.P.H. (Tuberculosis).

W. MACEWEN, O.B.E., M.B., Ch.B., D.P.H. (School Medical Inspection).

MARY A. S. DEACON, M.B.E., M.B., B.S. (School Medical Inspection).

Assistant Medical Officers (part time):

CHARLES S. BREWER, O.B.E., L.R.C.P. & S. (Ed.), D.P.H. (Child Welfare).

WILLIAM R. DALZELL, M.A., M.B., C.M. (Venereal Diseases).

JOHN GRIMSHAW, M.D., B.S., D.P.H. (School Oculist).

Dental Surgeon (whole time):

P. WILSON SMITH, L.D.S. (Glas.).

Bacteriologist and Pathologist:

Professor J. M. BEATTIE, M.A., M.D., etc.

Analyst:

HERBERT E. DAVIES, M.A., B. Sc., F.I.C.

Inspectors:

WILLIAM DAWSON, Assoc. San. Inst. (Chief Inspector and Inspector under the Food and Drugs Acts).

JOHN M. CARNIE (Meat, Fish, and Slaughter House Inspector); ALFRED LONGSTAFF (Housing Inspector); JOHN LEE, H. T. TAYLOR, W. H. TILSTON, JOSEPH CROSHAW (District Sanitary Inspectors); S. G. RACKHAM (Workshops, Food and Drugs, etc., Inspector); ISAAC TAYLOR (Disinfecting Inspector); GEORGE WILLS (Shops Inspector); WILLIAM S. EDWARDS (Common Lodging Houses Inspector).

Matron, Fever Hospital:

Miss EMILY YEOMANS.

Matron, Thingwall Sanatorium:

Miss F. G. MIDDLETON.

Health Nurses:

Miss M. GIBSON (Chief Health Nurse).

Mrs. L. E. FLETCHER (Health Nurse and Inspector of Midwives).

Miss BOYDELL, Miss BRINSON, Miss COOKSON, Miss CRAINE, Miss EVANS, Miss FLETCHER, Miss GRAHAM, Miss HOOD, Miss JENNISON, Miss JONES, Miss LEWIS, Miss ROBINSON, Miss STEELE, Mrs. WILSON (Health Nurses).

Clerks:

JOSEPH BENNETT (Chief Clerk).

JOHN OWEN, ROLAND E. JONES, ERIC P. ROGERS, HAROLD BATY, THOMAS OVERSBY, W. S. SHAW, J. CHALLINOR, N. WILSON, C. CLAYTON, C. MARTIN, Miss E. FITZPATRICK, Miss E. M. PINCHES.

General:

NURSING STAFF, FEVER HOSPITAL—20.

DOMESTIC STAFF, FEVER HOSPITAL—20.

MALE STAFF, FEVER HOSPITAL—4.

NURSING STAFF, THINGWALL SANATORIUM—5.

DOMESTIC STAFF, THINGWALL SANATORIUM—7.

MALE STAFF, THINGWALL SANATORIUM—1.

SANITARY LABOURERS, &c.—9.

AREA, SITUATION, AND WEATHER.

Birkenhead occupies an area of 3,909 acres, a little over six square miles, and is the largest borough in Cheshire. A note regarding the geographical situation and natural features of the Borough appeared in my annual report for 1919.

METEOROLOGICAL RESULTS.

The mean barometer reading for the whole year was 30.045 inches, as compared with a mean of 29.924 for the past 55 years.

The number of wet days in 1921 was 165.

The total amount of rainfall at Bidston was 22.470 inches, as compared with an average annual rainfall for the past 55 years of 28.417 inches.

The mean temperature for the year was 51.0° Fahrenheit.

In Tables A 1 and A 2 monthly and weekly results are set out; those in Table A 2 being for the 52 weeks ending December 31st, 1921.

TABLE A 1.

Meteorological observations during 1921. Monthly results.

1921	Mean Temperature	Mean Barometer	Rainfall—1 ft above ground
	° F.	INCHES	INCHES
January	45.9	29.858	2.943
February	41.4	30.283	0.185
March	45.3	29.944	1.389
April	46.9	30.149	0.919
May	51.9	29.933	1.801
June	57.6	30.195	0.099
July	64.4	30.083	0.822
August	58.4	29.891	4.909
September ..	57.5	30.101	1.434
October	56.3	30.129	2.964
November	40.8	30.043	2.010
December	45.7	29.986	2.995

TABLE A 2.
 Meteorological observations during 1921. Weekly results.

Weeks.	Barometer means reduced to sea level & to 32°F.	Means of Evaporation.	Thermometer means.	Rainfall.		Average percent'ge of cloud to clear sky.	Mean hourly horizontal motion of air in miles	Percent'ge of time wind blew fm S., SW. W. & NW.
				Hours.	Inches.			
1	29.841	44.12	46.27	11.4	0.431	81.4	15.9	86.90
2	29.667	40.80	42.95	17.3	0.641	71.4	22.7	60.11
3	30.056	43.92	46.22	15.2	0.541	74.2	33.6	94.04
4	30.029	46.68	48.75	11.2	0.272	77.1	22.3	98.20
5	29.694	37.67	39.35	14.5	0.510	74.2	13.6	28.50
6	30.521	36.95	38.54	0.5	0.011	75.7	7.1	33.90
7	30.284	41.34	43.47	0.6	0.026	81.4	19.7	76.70
8	30.289	40.45	43.08	5.3	0.118	44.2	12.8	36.90
9	30.149	41.65	44.72	15.7	0.300	87.1	21.7	97.60
10	29.827	40.12	43.22	6.4	0.085	68.5	13.2	67.20
11	29.936	42.68	45.54	17.5	0.570	77.1	19.0	71.40
12	30.141	45.04	47.82	13.8	0.249	75.7	19.3	91.60
13	29.953	43.20	46.18	8.2	0.185	65.7	19.0	91.60
1st Qr.	30.029	41.89	44.31	137.6	3.939	74.1	18.4	71.82
14	30.326	43.20	47.20	3.4	0.052	51.4	15.7	57.10
15	29.972	41.48	45.37	19.7	0.647	55.7	18.9	51.10
16	29.968	40.84	43.67	10.2	0.160	64.2	10.4	67.80
17	30.285	46.72	51.15	3.0	0.060	48.5	10.7	29.70
18	29.823	44.31	47.68	11.2	0.208	62.8	11.2	51.70
19	29.886	50.71	54.10	15.7	0.463	74.2	9.3	68.45
20	30.119	47.05	52.30	2.9	0.034	35.7	12.1	95.20
21	30.029	48.67	52.81	15.8	0.879	54.2	11.2	69.60
22	30.398	48.78	54.37	10.3	0.229	50.0	13.7	71.40
23	30.672	50.72	56.41	00.0	0.000	45.7	19.7	54.70
24	30.301	53.24	57.02	2.8	0.025	61.4	13.9	86.30
25	30.146	55.24	60.31	3.6	0.055	64.2	17.9	82.10
26	30.186	52.95	57.85	1.6	0.007	42.8	10.4	52.90
2nd Qr.	30.162	47.99	52.32	100.2	2.819	54.6	13.4	64.46
27	30.247	58.20	63.37	1.3	0.034	30.0	7.3	70.20
28	30.041	61.02	67.50	6.6	0.177	41.4	11.5	38.09
29	30.334	60.44	64.77	8.7	0.293	71.4	15.3	94.40
30	29.783	57.91	63.25	9.7	0.762	80.0	15.8	70.20
31	29.776	57.64	61.30	37.9	1.859	87.1	15.5	93.40
32	29.810	54.25	57.40	29.4	1.579	75.7	12.8	75.50
33	29.969	55.84	59.60	7.0	0.637	54.2	9.1	55.90
34	29.947	56.88	59.44	6.2	0.148	82.8	14.6	93.40
35	29.966	53.35	55.45	22.6	0.793	71.4	12.8	70.80
36	30.006	55.57	60.55	6.3	0.296	22.8	7.8	81.50
37	29.936	51.50	55.41	18.6	0.994	67.1	19.0	66.60
38	30.275	55.75	58.30	5.2	0.056	67.1	9.8	58.90
39	30.226	52.41	56.00	0.0	0.000	45.7	8.1	26.10
3rd Qr.	30.024	48.52	60.18	159.5	7.628	61.2	12.2	68.84
40	29.910	57.95	61.31	23.9	0.912	84.2	12.0	40.40
41	30.151	55.07	58.04	8.3	0.680	54.2	10.2	44.60
42	30.847	55.18	56.50	12.5	1.020	64.2	11.3	66.60
43	30.381	49.30	51.32	4.0	0.308	70.0	15.9	81.50
44	29.980	47.10	49.67	23.8	1.045	85.7	20.4	83.90
45	30.231	33.95	36.47	10.2	0.362	38.5	10.5	20.80
46	29.948	39.30	41.02	12.5	0.317	84.2	13.7	17.80
47	30.124	37.92	40.22	12.9	0.274	81.4	16.7	00.00
48	29.934	36.28	38.62	2.3	0.076	77.1	16.2	00.00
49	30.186	44.71	46.60	9.3	0.205	81.4	19.2	76.10
50	30.110	44.20	46.24	9.9	0.292	64.2	18.5	94.60
51	29.796	44.22	46.87	22.8	1.089	70.0	30.7	94.60
52	29.880	43.75	46.47	19.0	1.389	68.5	29.9	95.80
4th Qr.	30.112	45.30	47.64	171.4	7.969	71.0	17.3	55.13
Year ...	30.081	45.92	51.11	568.7	22.355	65.2	15.3	65.21

POPULATION, BIRTHS, AND DEATHS.

POPULATION.

A full statement showing the growth of the population from 1801 onwards was given in my annual report for 1919.

Population, 1911.—The population of the Borough at the time of the 1911 census was 130,794.

Population, 1921.—The census of 1921, originally planned for the 24th April, was unavoidably postponed until the 19th June. While the latter date avoided the recognised programme of industrial holidays, it was found that by June some holiday movement was (largely owing to the abnormally fine weather) already in progress. This was reflected in the census returns by the inclusion in the case of the more popular holiday areas of varying and sometimes substantial proportions of visitors.

The use of local population figures differing materially from the figures of normal resident populations would obviously be unsuitable in connection with statistics of births and deaths classified according to area of residence. The Registrar-General, therefore, decided that it was necessary to make an adjustment for these purposes by measuring the extent of the non-resident population in certain areas and by effecting its re-distribution throughout the country.

The actual census population of Birkenhead on 19th June, 1921, as set out in the Preliminary Report, was 145,592; but the official mid-year population, adjusted as stated above, was **147,800**; and on this figure all rates have been calculated.

Increase of population, 1911-1921.—Taking the revised figure given above (147,800), the increase in population as between April 1911 and mid-year 1921 was 17,006.

The increase in the actual census figures was 14,798. This corresponds to an inter-censal increase of 11.1% on the 1911 population. Of the 82 county boroughs in England and Wales, 9 show a higher percentage increase than Birkenhead; 59 show a lower percentage increase; while 13 show an actual decrease in population during the inter-censal period.

The inter-censal increase for the whole country was only 5.03 per cent.—about one-half of the increase in the preceding inter-censal period (1901-1911).

Increase of population, 1801-1921.—The growth of population in the area now included in the County Borough of Birkenhead during the past 120 years is shown as follows:—

1801	707
1811	849
1821	1,369
1831	4,271
1841	11,998
1851	34,275
1861	51,649
1871	65,971
1881	84,006
1891	99,857
1901	110,915
1911	130,794
1921 (mid-year)	147,800

Position of Birkenhead with reference to other towns.—There are 1,126 urban districts in England and Wales. Of these, 258 have a population of 20,000 and over. Birkenhead takes 27th place among these 258 towns.

Density of population.—The density of the population of Birkenhead at the time of the 1911 census was 33.9 per acre. In the 1921 census returns the area of the Borough is given as 3,909 acres. Calculated from this and from the revised mid-year estimate of population, the population-density of the Borough (mid-year 1921) was 37.8 per acre.

The corresponding ratio of density for the 82 county boroughs of England and Wales (1921 census) was 19.6 persons per acre.

Ward- and sex-distribution, &c.—Information regarding the census returns on these subjects is not yet available.

BIRTHS.

Births registered during 1921, and birth-rate.—During the year 3,820 births belonging to the Borough were *registered*. (This total includes 17 Birkenhead births registered in other areas and transferred to Birkenhead, and excludes 105 births belonging to other areas which occurred in Birkenhead and were transferred to the areas concerned. Among the latter are a large number of births which occurred at the Birkenhead Maternity Hospital and the Birkenhead Union Infirmary.)

This corresponds to a birth-rate of 25.8 per 1,000 of the population.

Birth-rate in recent years.—The birth-rates since 1911 (calculated on population figures not revised in the light of the 1921 census) are as follows:—

1911	28.4 per 1,000
1912	28.2 "
1913	28.7 "
1914	27.3 "
1915	27.4 "
1916	26.9 "
1917	22.4 "
1918	21.1 "
1919	22.5 "
1920	27.7 "
1921	25.8 "

Comparison of birth-rate with rates for country generally.—

	Per 1,000 of population.
England and Wales	22.4
96 Great Towns (including London)	23.3
148 Other Towns above 20,000 population	22.7
London	22.3
Birkenhead	25.8

Sex-distribution of births.—Of the 3,820 births, 1,893 were males and 1,927 females; a proportion of 982: 1,000.

Legitimacy.—Of the 3,820 births registered, 140 were illegitimate; a percentage of 3.6.

Births notified during 1921.—During the year 3,882 births were notified in the Borough under the Notification of Births Acts, 1907 and 1915. Of these, 148 were still-births, leaving a total of 3,734 live births. This total includes births which occurred in the Birkenhead Maternity Hospital, the Birkenhead Union Infirmary and the Birkenhead Borough Hospital, many of which were transferable to other areas.

The following is an analysis of the above births:—

Births in Public Institutions:—

Maternity Hospital	451	(29 still-births)
Union Infirmary	109	(11 „)
Borough Hospital	5	
Other births (including those in nursing homes):—		
Notified by doctors only	358	(19 still-births)
Births attended by midwives, or midwives and doctors	2959	(89 „)
	3882	(148 „)

Un-notified births.—The Registrars reported 127 cases of un-notified births. 74 of these were attended by medical practitioners, 38 by certified midwives and doctors, 14 by the Maternity Hospital staff, and 1 by the Borough Hospital staff.

DEATHS.

Death-rate.—1,716 deaths occurred during the year; the total figure includes 124 deaths of Birkenhead residents which occurred outside the Borough, but excludes 104 deaths of non-residents which occurred in the area.

This gives a death-rate of 11.6 per 1,000—the *lowest annual death-rate which has been recorded in the Borough*. The next lowest rate was 13.3—recorded in 1920 and 1917.

Deaths in recent years.—The death-rates since 1911 are as follows (the rates for 1912-1920 have not been revised in the light of the 1921 census returns):—

1911	16.0 per 1,000
1912	14.7 „
1913	14.9 „
1914	15.8 „
1915	15.6 „
1916	14.2 „
1917	13.3 „
1918	17.6 „
1919	13.7 „
1920	13.3 „
1921	11.6 „

Influenza and its complications were the main contributing factors in the high death-rate of 1918.

Seasonal deaths.—The following gives the deaths for each quarter of the years 1920 and 1921.

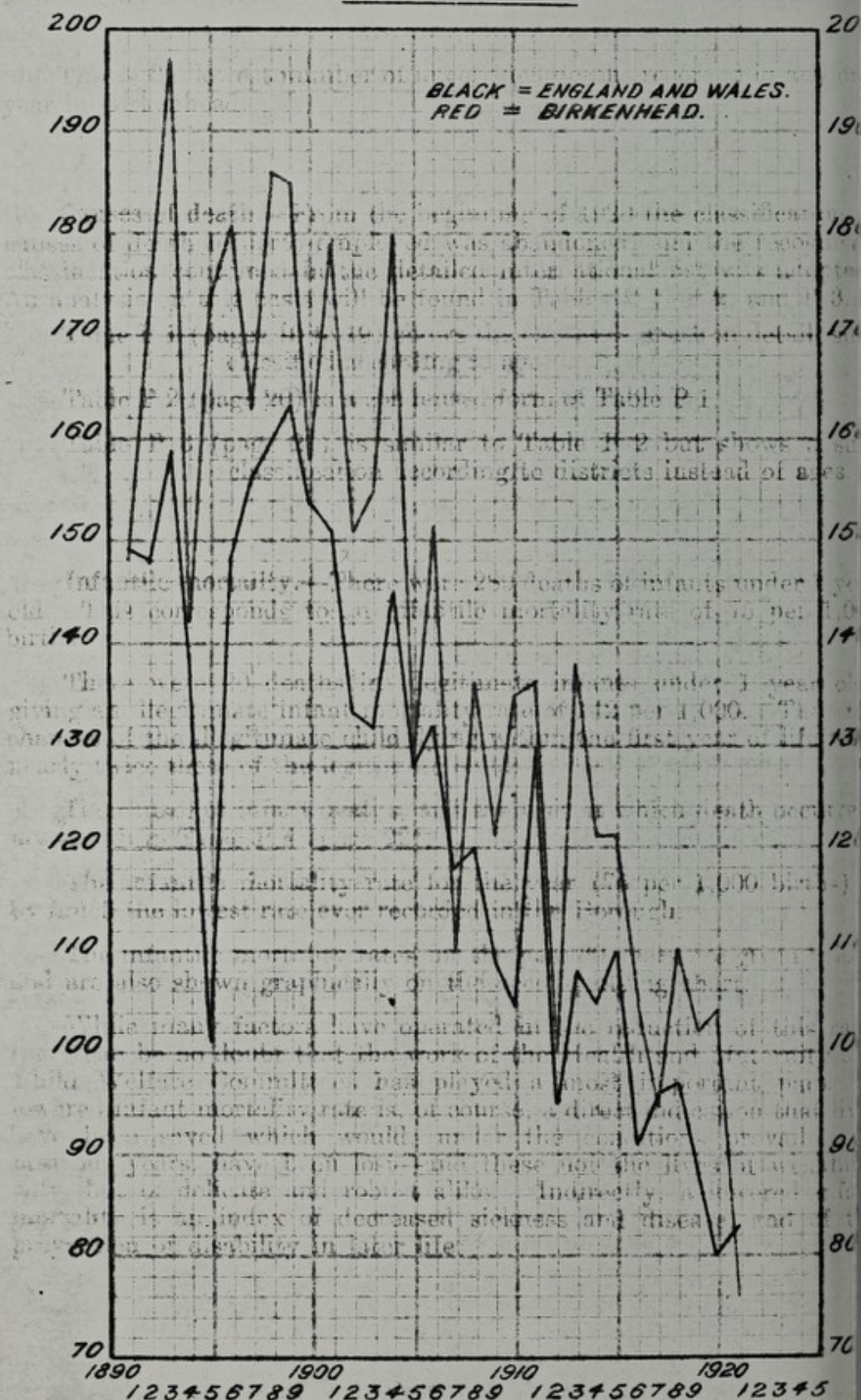
	No. of deaths	
	1920	1921
First quarter.....	631	481
Second quarter.....	478	384
Third quarter.....	401	409
Fourth quarter.....	524	442
Totals	2034	1716

Sex-distribution of deaths.—Of the total deaths 905 were males and 811 females, a proportion of 1,115: 1,000.

Coroners' inquests.—Coroners' inquests were held regarding 124 deaths—that is, in 7 per cent. of the total deaths during the year. There were no deaths due to overlaying during the year.

Uncertified deaths.—Not all the death causes which are classified represent diseases or symptoms observed and certified by medical men in attendance during the last illness, or verdicts following official investigation. A proportion of the death causes are still entered in the register on the doubtful testimony of deceased persons' relatives, or friends, or fellow-lodgers. The registrars have, therefore, been requested to mark in the returns furnished every death not certified by a registered practitioner or made the subject of a coroner's inquest. In 1921, out of the 1,716 deaths registered, 2 were marked "not certified," that is, 0.11 per cent. The causes of the 2 deaths were

INFANT MORTALITY PER 1000 BIRTHS. 1890 — 1921.



tered in accordance with the statements of persons giving information to the registrars, viz.:—

Inanition 2

This is the lowest number of uncertified deaths recorded in any one year in Birkenhead.

Causes of death.—From the beginning of 1920 the classification of causes of death hitherto employed was abandoned, and the recognised classification contained in the detailed international list was adopted. An analysis on this basis will be found in Tables P 1, P 2, and P 3.

Table P 1 (pages 10 to 19) shows the causes of death in detail, sub-classified according to age.

Table P 2 (page 20) is a condensed form of Table P 1.

Table P 3 (page 21) is similar to Table P 2 but shows a sub-classification according to districts instead of ages.

Infantile mortality.—There were 289 deaths of infants under 1 year old. This corresponds to an infantile mortality rate of 75 per 1,000 births.

There were 20 deaths in illegitimate infants under 1 year old; giving an illegitimate infant mortality rate of 142 per 1,000. Thus the chances of the illegitimate child dying within the first year of life were nearly twice those of the legitimate child.

The causes of infant deaths, and the ages at which death occurred, are shown in Table P 4 (page 22).

The infantile mortality rate for the year (75 per 1,000 births) is much the lowest rate ever recorded in the Borough.

The infantile mortality rates for the past 30 years are given below, and are also shown graphically on the accompanying chart.

While many factors have operated in the reduction of this rate, there can be no doubt that the work of the Health and Maternity and Child Welfare Committees has played a most important part. A lowered infant mortality rate is, of course, a direct indication that lives have been saved which would, under the conditions prevailing in previous years, have been lost—and these not the lives of weaklings only, but of delicate and robust alike. Indirectly, a lowered infant mortality is an index of decreased sickness and disease, and of the prevention of disability in later life.

Year.	Infant mortality rate.	Year.	Infant mortality rate.	Year.	Infant mortality rate.
1891.....	148	1902.....	151	1912.....	98
1892.....	168	1903.....	155	1913.....	117
1893.....	197	1904.....	180	1914.....	122
1894.....	142	1905.....	129	1915.....	122
1895.....	174	1906.....	151	1916.....	105
1896.....	181	1907.....	110	1917.....	95
1897.....	163	1908.....	136	1918.....	110
1898.....	186	1909.....	121	1919.....	102
1899.....	185	1910.....	135	1920.....	102
1900.....	158	1911.....	136	1921.....	75
1901.....	179				

Deaths from tuberculosis.—Tuberculosis was responsible for 11 per cent. of all the deaths recorded in the Borough in 1921. The deaths from the disease were as follows:—

Deaths from tuberculosis of the lungs	154
Deaths from other forms of tuberculosis	40
Total	194

This gives a tuberculosis death-rate of 1.31 per 1,000 of the population.

Of the 154 deaths from pulmonary tuberculosis during 1921, 141 occurred in individuals between 15 and 65 years old—that is, of a wage earning age.

This subject is further dealt with in the “ Tuberculosis ” section of this report.

Deaths from epidemic diseases.—The seven “ principal epidemic diseases ” caused 134 deaths, as follows:—

Diarrhœa and enteritis (under 2 years)	87
Whooping Cough	14
Measles	9
Scarlet Fever	8
Diphtheria (including membranous croup).....	15
“Fever” (enteric, typhus, and simple continued fever)	1
Smallpox	0

This corresponds to a death-rate from all these diseases of 0.90 per 1,000 of the population.

Deaths from other notifiable infectious diseases.—Pneumonia caused, in its various forms, 134 deaths; puerperal fever caused 5; cerebro-spinal fever, 1; acute encephalitis lethargica, 1.

Deaths from certain non-notifiable infectious diseases.—Syphilis was returned as the cause of 5 deaths. With the existing system of death registration there is every likelihood that many deaths caused directly or indirectly by this disease are not so recorded in the death certificates.

Comparison of Birkenhead death-rates with those for country generally.—In Table P 5 (page 23) Birkenhead rates are shewn together with those for the country generally. The latter are provisional figures kindly supplied to me by the Registrar-General. Non-civilians are included in the figures for England and Wales, but not for other areas.

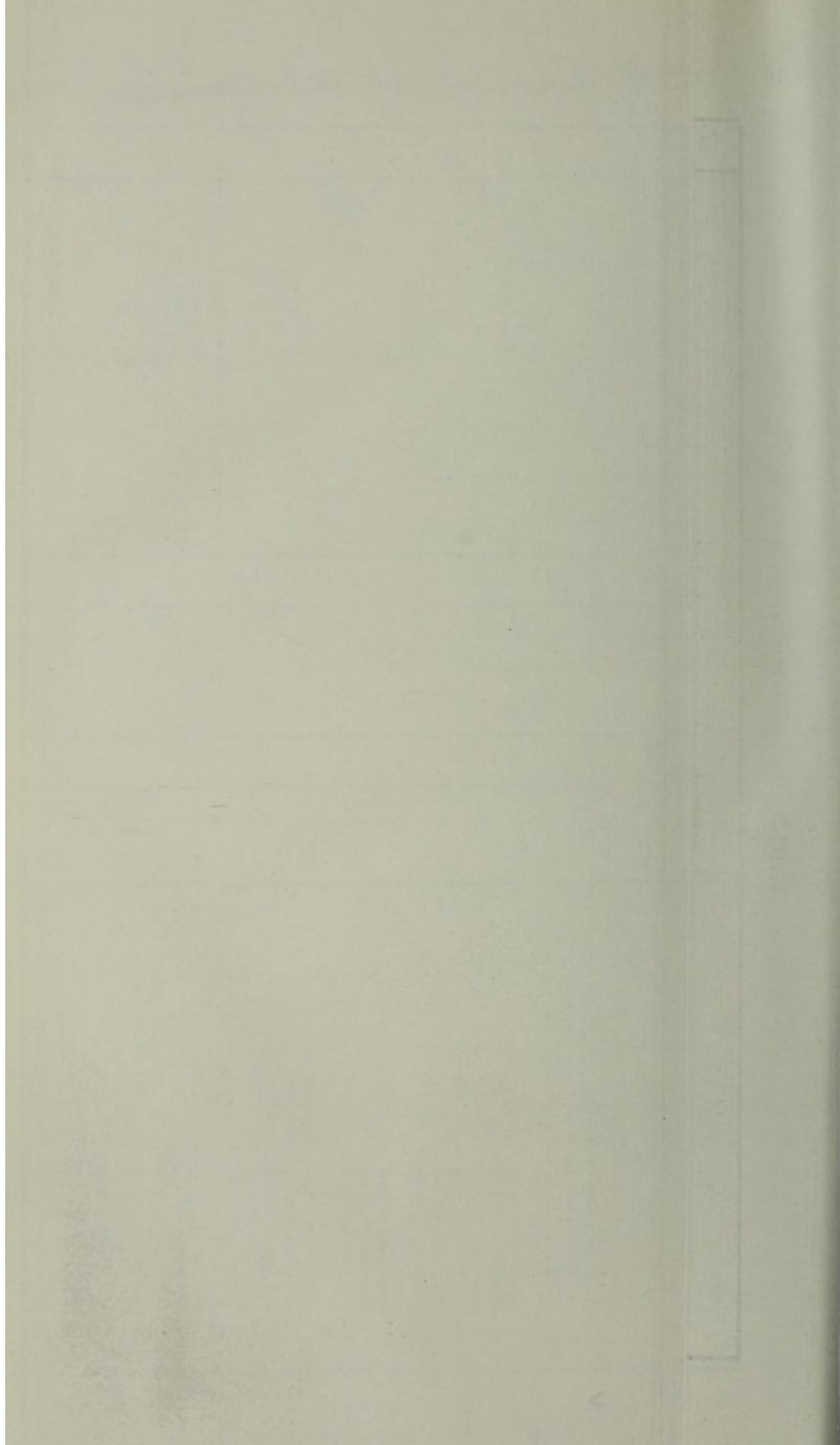
Deaths belonging to the County Borough of Birkenhead classified according to the detailed international list of causes, as adapted for use in England and Wales registered during the year ending 31st December, 1921.

[illegible][illegible]

Date	Time
1900	10
1901	11
1902	12
1903	13
1904	14
1905	15
1906	16
1907	17
1908	18
1909	19
1910	20
1911	21
1912	22
1913	23
1914	24
1915	25
1916	26
1917	27
1918	28
1919	29
1920	30

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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[illegible][illegible]



VIII.—The puerperal state.	
134. A. Morton	1
B. Hemorrhage of pregnancy	1
C. Uncontrollable vomiting	2
D. Ectopic gestation	1
E. Other accidents of pregnancy	3
135. Puerperal hemorrhage	1
136. Other accidents of childbirth.....	2
137. Puerperal fever.....	1
138. A. Puerperal nephritis and uremia	2
B. Puerperal albuminuria and Bright's disease.....	1
C. Puerperal convulsions	1
139. A. Puerperal phlegmasia alba dolens, and phlebitis	1
B. Puerperal embolism and sudden death	1
140. Puerperal insanity	1
141. Puerperal diseases of the breast.....	1
VIII.—Diseases of the skin and of the cellular tissue.	
142. A. Senile gangrene	1
B. Noma, gangrene of mouth	1
C. Noma pudendi	1
D. Other gangrene	1
143. Carbuncle, boil	1
144. A. Phlegmon	1
B. Ulcerate abscess	1
145. A. Ulcer, bed sore	1
B. Eczema	1
C. Pemphigus	1
D. Other diseases of integumentary system	1
IX.—Diseases of the bones and of the organs of locomotion.	
146. Diseases of the bones	1
147. Diseases of the joints	1
148. Amputations	1
149. Other diseases of locomotor system	1



TABLE P 1.—CONTINUED.

Causes of death	All ages	Ages at death												Total under 5 years	85 and up, wards	55 to 60
		Months						Total under 1 year								
		0-3	3-6	6-12	1	2	3	4	5	6	7	8	9			
X.—Malformations.																
150. A. Congenital hydrocephalus	1	1			1									1		
B. Phimosis	4	4			4									4		
C. Congenital malformation of heart	6	6			6									6		
D. Other congenital malformations																
XI.—Diseases of early infancy.																
151. A. Premature birth	62	61	1		62									62		
B. Infantile atrophy, debility & marasmus	47	36	5	6	47									47		
C. Tetanus neonatorum	2	2			2									2		
D. Sclerema and edema neonatorum																
E. Want of breast milk																
152. A. Diseases of umbilicus, &c.	1	1			1									1		
B. Atelectasis	13	13			13									13		
C. Injuries at birth	3	3			3									3		
D. Cyanosis neonatorum																
153. Lack of care																
XII.—Old age.																
154. A. Senile dementia	88													88		
B. Senile decay																
XIII.—Affections produced by external causes.																
155. Suicide by poison	3													3		
156. " asphyxia	2													2		
157. " hanging or strangulation																
158. " drowning	1													1		
159. " fire	2													2		
160. " cutting or piercing instruments																
161. " jumping from high place																
162. " crushing																

163. Other suicides	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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TABLE P 2.

Deaths: Causes and ages.

Causes of death	Net deaths at the subjoined ages of residents, whether occurring within or without the district.								
	All ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards
All causes { Certified	1714	287	78	47	67	93	235	431	476
{ Uncertified	2	2	...	...	...	...	...	...	...
Enteric fever	1	...	...	...	...	...	...	1	...
Smallpox	...	...	...	...	...	...	...	...	...
Measles	9	...	6	3	...	...	...	...	...
Scarlet fever	8	1	2	...	2	3	...	...	...
Whooping cough	14	8	3	3	...	...	...	...	...
Diphtheria and croup	15	1	1	4	8	...	1	...	...
Influenza	12	1	...	...	2	1	2	4	2
Erysipelas	...	...	...	...	...	...	...	...	...
Phthisis (pulmonary tuberculosis)	154	1	1	1	6	33	69	39	4
Tuberculous meningitis	14	2	2	3	3	3	1	...	...
Other tuberculous diseases	26	1	2	7	4	4	1	6	1
Cancer (malignant disease)	186	...	...	...	...	1	20	95	70
Rheumatic fever	12	...	...	...	1	2	1	4	4
Meningitis	11	1	2	3	2	...	1	2	...
Organic heart disease	117	1	...	...	1	4	12	56	43
Bronchitis	120	12	3	3	...	2	5	39	56
Pneumonia (all forms)	134	21	25	8	5	7	21	26	21
Other diseases of respiratory organs	21	...	...	1	...	1	4	7	8
Diarrhoea and enteritis (under 2 years)	87	72	15	...	...	...	...	...	...
Appendicitis and typhlitis	16	...	...	...	5	4	3	3	1
Cirrhosis of liver	6	...	...	...	...	...	1	3	2
Alcoholism	2	...	...	...	...	...	1	1	...
Nephritis and Bright's disease	45	...	...	...	...	2	7	25	11
Puerperal fever	5	...	...	...	...	1	4	...	...
Other accidents and diseases of pregnancy and parturition	12	...	...	...	...	4	7	1	...
Congenital debility and malformation, including premature birth	122	122	...	...	...	...	...	...	...
Violent deaths, excluding suicide	55	...	4	6	9	9	10	9	8
Suicides	10	...	...	...	...	...	4	6	...
Other defined diseases	482	43	8	4	18	12	58	98	241
Diseases ill-defined or unknown	20	2	4	1	1	...	2	6	4
Totals	1716	289	78	47	67	93	235	431	476

TABLE P 3

Deaths: Causes and districts.

Causes of death	Deaths in or belonging to localities at all ages						Total deaths in Public Institutions in the district
	Whole Borough	Birkenhead*	Tranmere*	Claughton Ward	Oxton Ward	Bebington Ward	
All causes { Certified	1714	1012	552	71	49	30	526
{ Uncertified	2	...	2	...	...	...	...
Enteric fever	1	1	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...
Measles	9	6	3	...	...	...	1
Scarlet fever	8	3	4	...	1	...	4
Whooping cough	14	7	7	...	...	...	2
Diphtheria and croup	15	9	4	2	...	...	10
Influenza	12	7	4	...	1	...	...
Erysipelas	...	...	...	...	...	...	...
Phthisis (pulmonary tuberculosis)	154	92	51	5	2	4	50
Tuberculous meningitis	14	9	5	...	...	...	5
Other tuberculous diseases	26	15	9	2	...	...	14
Cancer (malignant disease)	186	95	70	8	10	3	50
Rheumatic fever	12	5	4	1	1	1	...
Meningitis	11	6	4	...	...	1	...
Organic heart disease	117	65	46	4	...	2	27
Bronchitis	120	74	35	8	2	1	42
Pneumonia (all forms)	134	89	37	3	3	2	27
Other diseases of respiratory organs	21	15	4	...	2	...	10
Diarrhoea and enteritis (under 2 years)	87	73	12	1	...	1	72
Appendicitis and typhlitis	16	6	7	1	2	...	12
Cirrhosis of liver	6	2	3	...	1	...	1
Alcoholism	2	1	1	...	...	...	2
Nephritis and Bright's disease	45	33	9	2	1	...	11
Puerperal fever	5	2	2	1	...	...	2
Other accidents and diseases of pregnancy and parturition	12	7	4	1	...	...	6
Congenital debility and malformation, including premature birth	122	87	30	3	2	...	22
Violent deaths, excluding suicide	55	38	15	1	...	1	25
Suicides	10	5	5	...	...	...	2
Other defined diseases	482	246	175	28	19	14	129
Diseases ill-defined or unknown	20	14	4	...	2	...	...
Totals	1716	1012	554	71	49	30	526

*" Birkenhead " district comprises Argyle, Grange and Cleveland wards. "Tranmere " district comprises Clifton, Egerton and Mersey wards.

NOTE.—All deaths which occurred in institutions are classified in the district in which the patient resided.

TABLE P 4.

Infant deaths, 1921: Causes and ages.

Causes of death	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	Over 4 weeks & under 3 months	3-6 months	6-9 months	9-12 months	Total under 1 year
All causes { Certified	67	25	22	14	128	45	58	38	18	287
{ Uncertified	2	..	..	..	2	..	..	..	..	2
Smallpox ..	..	..	..	..	..	..	..	..	..	..
Chickenpox ..	..	..	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	..	..	..	..
Scarlet fever ..	..	..	..	..	..	..	..	1	..	1
Whooping cough.....	..	..	..	1	1	1	1	4	1	8
Diphtheria and croup.....	..	..	..	..	..	..	1	..	..	1
Erysipelas ..	..	..	..	..	..	..	..	..	..	..
Tuberculous meningitis ..	..	..	..	..	..	..	1	1	..	2
Abdominal tuberculosis ..	..	..	..	..	..	..	1	..	..	1
Other tuberculous diseases.....	..	..	..	..	..	..	..	..	1	1
Meningitis (not tuberculous) ..	..	..	..	..	..	..	..	..	1	1
Convulsions ..	1	..	..	1	2	..	2	..	..	4
Laryngitis ..	..	..	..	..	..	..	..	..	..	..
Bronchitis ..	..	..	..	1	1	1	3	3	4	12
Pneumonia (all forms) ..	..	..	1	..	1	3	8	4	5	21
Diarrhœa ..	..	..	..	..	..	4	..	3	..	7
Enteritis ..	..	1	2	2	5	20	26	11	3	65
Gastritis ..	..	..	..	..	..	1	..	1	2	4
Syphilis ..	..	1	1	..	2	1	..	..	..	3
Rickets ..	..	..	..	..	..	..	1	..	..	1
Suffocation (overlying) ..	..	..	..	..	..	..	..	..	..	..
Injury at birth ..	1	2	..	..	3	..	..	..	..	3
Atelectasis ..	11	..	..	..	11	2	..	..	..	13
Congenital malformations... ..	5	3	3	..	11	..	..	..	..	11
Premature birth ..	36	10	10	2	58	3	1	..	..	62
Atrophy, debility and marasmus	12	6	4	7	29	9	5	6	..	49
Other causes.....	3	2	1	..	6	..	8	4	1	19
Totals.. ..	69	25	22	14	130	45	58	38	18	289

Net births in the year—

Legitimate

3680

Illegitimate

140

Net deaths in the year—

Legitimate infants

269

Illegitimate infants ...

20

TABLE P 5.

Death-rates: Comparison with rest of country.

	Annual death rate per 1000 civilian population								Rate per 1000 births		Percentage of total deaths				
	All causes	Enteric fever	Smallpox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhoea and enteritis (under 2 years)	Total deaths under 1 year	Deaths in public institutions	Certified causes of death	Inquest cases	Uncertified causes of death
England and Wales	12.1	0.02	0.00	0.06	0.03	0.12	0.12	0.23	0.44	15.5	83	25.5	92.5	6.4	1.1
96 great Towns, including London (census population exceeding 50,000)	12.3	0.01	0.00	0.08	0.04	0.13	0.15	0.23	0.40	19.3	87	33.2	92.5	6.8	0.7
148 smaller Towns	11.3	0.01	0.00	0.05	0.03	0.11	0.11	0.26	0.35	15.6	84	17.7	93.5	5.1	1.4
(census population 20,000 to 50,000)															
London	12.4	0.01	—	0.05	0.06	0.12	0.25	0.23	0.42	21.3	80	49.2	91.6	8.2	0.2
Birkenhead.....	11.6	0.06	0.00	0.06	0.05	0.09	0.10	0.08	0.43	22.7	75	30.6	92.7	7.2	0.1

LOCAL INDUSTRIES.

OCCUPATIONS.

The staple industries of the district are shipbuilding, ship-repairing and engineering. The 1921 census returns giving details regarding the number of residents engaged in different occupations had not been received at the time of writing this report.

UNEMPLOYMENT.

The Ministry of Health request medical officers to give in their annual reports an indication of the extent of unemployment and of the amount of poor law relief in their areas.

The returns of unemployment for each month of the year are shown below:—

TABLE O 1.
Unemployment during 1921.

Month	Live register	Increase or decrease in live register	Applicants placed	
			Locally	In other districts
January	5788	Inc. 2162	131	4
February	7575	Inc. 1787	174	11
March	7247	Dec. 328	400	20
April	9884	Inc. 2637	240	9
May	9653	Dec. 231	351	2
June	9995	Inc. 342	217	10
July	10864	Inc. 869	162	6
August	10191	Dec. 673	140	2
September	8395	Dec. 1796	119	9
October	7959	Dec. 436	258	11
November	11189	Inc. 3230	211	6
December	11243	Inc. 54	254	2

AMOUNT OF POOR LAW RELIEF.

The following is a statement of the sums expended in the relief of the poor in the Birkenhead Union for the year ended 30th September, 1921:—

Union Institution	£14,097	3	11
Union Infirmary	18,071	1	6
Children's Homes	4,962	7	7 $\frac{1}{4}$
Outdoor relief (actual cash payments to recipients of)	24,025	0	4
Lunatics in asylums and licensed houses (total cost of maintenance)	30,560	5	3
	£91,715	18	7 $\frac{1}{4}$

The Birkenhead Union area covers the County Boroughs of Birkenhead and Wallasey, and the parishes of Bidston-cum-Ford and Noctorum. The populations of these three component parts were, in 1911:—

Birkenhead	130,794	(62.1 per cent)
Wallasey	78,504	(37.3 per cent)
Bidston and Noctorum	1,172	(0.6 per cent.)

WATER SUPPLY, FOOD, AND DRUGS.

WATER SUPPLY.

The new gravitation water supply for the Borough from the Alwen reservoir in North Wales became available on 15th August, 1921.

The history of the new scheme dates back to June, 1900, when an inquiry into the present and future supply of water to Birkenhead was instituted by a sub-committee appointed by the Gas and Water Committee. Powers to carry out the Alwen and Brenig schemes were obtained in the Birkenhead Corporation Water Act, 1907. The preliminary trial trench to prove the foundations for the dam was cut early in 1910. The foundation stone for the dam was laid in October, 1911.

The top water level of the Alwen Reservoir is 1,190 feet above ordnance datum. The length of the aqueduct from Alwen to the Flaybrick Reservoir is 42 miles.

The capacity of the Alwen Reservoir is 3,200,000,000 gallons and the average daily yield available from the reservoir is approximately 7,200,000 gallons.

The average consumption of water for all purposes within the Corporation water area in and adjoining the County Borough of Birkenhead is about 4 million gallons per day, and in addition to this the Corporation are committed to supply a further total of 1.25 million gallons per day in various places along the Alwen aqueduct.

The new supply is now available for the whole of the Borough with the exception of Oxton and Bebington wards; these are still supplied by the Wirral and West Cheshire Water Companies, the water being drawn from deep wells in the new red sandstone.

MILK SUPPLY.

Source.—Milk is supplied to the Borough chiefly from farms in Cheshire, Shropshire, Denbighshire and Flintshire.

Milkshops, etc.—The total number of milkshops in the Borough is 175. There are in addition 16 purveyors of milk, 5 cowsheds, and 55 farmers resident outside Birkenhead registered to purvey milk inside the Borough.

Milkshops are regularly inspected and the register of milk sellers is revised week by week.

During the year 360 notices to whitewash and efficiently to cleanse milkshops, cowsheds, and dairies were served on occupiers of such premises, and complied with.

Quality of milk.—The composition of the various samples of milk taken in the Borough and analysed during the year 1921 is set out in Table F 1 (page 28), and gives an indication of the general quality of the milk supply.

Preservatives in milk and cream.—Samples taken under the Public Health (Milk and Cream) Regulations, 1912 and 1917, during the year showed the following results:—

1. *Milk, and cream not sold as preserved cream.*

Article	No. of samples examined for the presence of a preservative (a)	No. in which a preservative was reported to be present, and percentage of preservative found in each sample (b)
Milk	123	1 6 grs. per pint
Cream	2	2 { 0.37% 0.22%

Nature of preservative in each case in column (b).....

Boric acid.

Action taken under the Regulations in regard to it

In the first and third cases the Vendors were summoned and fined £2 each. In the second case the Vendor submitted an explanation, which was accepted, and the Vendor cautioned

2. *Cream sold as preserved cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(1) Correct statements made	1
(2) Statements incorrect	1
Total	2

(3) Percentage of preservative found in each sample.	Percentage stated on statutory label.
0.36	0.4
0.70	0.4

(b) Determinations made of milk fat in cream sold as preserved cream.

(1) Above 35%	2
(2) Below 35%	—
Total	2

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the regulations have not been observed.

Nil.

(d) Particulars of each case in which the regulations have not been complied with, and action taken:—

For selling preserved cream containing a preservative in excess of the amount stated on the declaratory label—

One case. The vendor was summoned and fined £1 10s.

3. *Thickening substances.*

The Public Analyst has not found evidence of the addition of any thickening substances to the samples of cream or preserved cream which have been analysed.

TABLE F 1.

Composition of milk samples taken during 1921.

Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat
Jan. 4	1	3.43	9.17	Apl. 29	98	3.50	8.86	Aug. 24	165	2.82	8.87
12	2	3.30	8.90		99	2.91	8.58		166	2.88	8.71
	3	3.32	8.56		100	3.30	8.66	27	167	3.18	8.67
	4	5.00	9.12	May 3	101	3.85	9.05	29	168	2.88	8.89
	5	3.05	8.89		102	4.20	8.74		169	3.13	9.08
	6	3.50	8.98		103	3.18	8.86		170	2.97	8.75
	7	3.72	8.62	27	116	1.95	9.09	30	171	3.10	9.05
Feb. 8	26	3.00	8.63		117	3.77	9.13		172	3.23	8.76
	27	4.65	8.89		118	3.19	9.06	Sept. 9	173	3.30	9.18
	28	3.65	8.81		119	3.06	9.10	15	174	3.37	9.22
	29	3.37	9.04		120	3.40	9.02		175	3.60	9.04
	30	3.52	9.04		121	4.60	8.60		176	4.25	9.00
Mar. 8	37	3.60	8.60		122	5.04	8.72	27	177	3.87	8.74
	38	3.20	8.50	31	123	4.02	8.94		178	3.60	8.90
	39	3.82	8.70		124	3.86	9.06		179	3.60	9.14
	41	3.31	8.93		125	4.30	9.04		180	3.80	8.73
	42	2.76	8.76		126	4.23	8.89		181	3.13	8.95
	43	3.72	8.66		127	3.58	9.00		182	2.79	9.27
11	49	3.00	8.66		128	2.67	8.07	30	183	3.16	9.06
29	56	3.70	8.50		129	3.30	8.91	Oct. 6	184	3.65	8.94
	57	3.77	8.85	June 1	130	3.12	8.94	19	231	4.10	8.92
	58	3.28	8.58	6	138	3.32	7.31		233	2.94	8.88
	59	6.07	8.61		139	2.32	7.99		235	5.80	9.16
	60	3.27	8.57	27	146	3.19	8.67	28	249	4.33	8.93
	61	3.00	8.86		147	6.60	8.72	Nov. 4	264	3.50	9.16
April 6	62	3.40	8.66	July 27	148	3.30	8.56	8	266	4.04	8.98
	63	3.37	7.98		149	3.03	6.80		267	3.12	8.16
	64	4.27	8.97		150	2.70	8.71		268	3.80	9.48
	65	3.87	8.51		151	3.12	9.14		269	3.85	9.19
	66	4.85	8.51	29	152	3.21	8.97		270	3.30	9.02
	67	3.58	8.45		153	3.27	8.57		271	3.25	9.23
13	69	3.06	7.99		154	4.09	8.83	12	284	4.25	8.67
	70	3.09	7.98		155	3.00	9.18	Dec. 2	315	3.70	8.77
25	83	4.64	8.46		156	3.50	8.74	13	322	3.21	7.98
	84	3.40	8.60		157	3.78	8.54		323	3.75	9.21
	85	2.58	8.68		158	2.76	8.69		324	4.30	9.00
	86	3.30	8.53	Aug. 2	159	4.00	8.72		325	4.30	8.75
	87	3.82	9.10	24	161	3.52	9.04		326	8.60	8.79
	88	2.40	8.50		162	2.01	8.79	17	328	3.53	8.25
	89	3.00	9.00		163	3.12	9.35	22	329	3.55	8.63
	90	3.52	8.69		164	3.28	9.05		330	3.87	8.69

Average percentage Fat, 3.57 ... Solids (not fat), 8.77

OTHER FOODS.

Abattoirs in Birkenhead.—Particulars regarding these—the abattoir within the Woodside Lairages and the Corporation abattoir at Tranmere—were given in the last annual report. There are no private slaughterhouses in the Borough.

Food inspection.—The Meat and Food Inspector reports that during the year there were killed 63,615 oxen, 212 calves, 5,753 pigs, 2,743 sheep, 2,285 lambs, and 3 goats; as set out in Table F 2.

TABLE F 2.
Animals killed during 1921.

	Oxen	Calves	Pigs	Sheep	Lambs	Goats
At Woodside lairage.	63039	2	1117	1241	—	—
At Wallasey shed No. 4.....	—	—	2	1101	—	3
At Wallasey landing stage.....	157	—	17	108	—	—
At the Birkenhead Abattoir... ..	419	210	4617	293	2285	—
Totals	63615	212	5753	2743	2285	3

The total number of carcasses seized was:—

At Woodside	330	weighing	121,645 lbs.
At Wallasey Stage	58	„	18,405 lbs.
At Nos. 4 & 5 Sheds, Wallasey	40	„	4,120 lbs.
At Tranmere Abattoir	21	„	4,741 lbs.
At shops	1	„	112 lbs.
At other premises	3	„	460 lbs.
Total	453	„	149,483 lbs.

The number of parts of carcasses seized was:—

At Woodside	576	weighing	25,933 lbs.
At Wallasey Stage	3	„	46 lbs.
At Nos. 4 & 5 Sheds, Wallasey ...	3	„	43 lbs.
At Tranmere Abattoir	24	„	452 lbs.
Total	606	„	26,474 lbs.

The total weight of offal seized was 118,940 lbs. The total weight of articles of food seized at various premises in the Borough was 10,509 lbs.

No action was taken during the year under Section 117 of the Public Health Act, 1875.

Carcases condemned for tuberculosis.—During the year 165 carcasses and 553 parts of carcasses were condemned for tuberculosis.

SALE OF FOOD AND DRUGS ACTS.

During the year 330 samples were taken. Of these 324 were formal and 6 were informal. The articles sampled are set out in the following table.

TABLE F 3.

Samples taken during 1921.

Article	No. samples taken formally	No. samples taken informally	Article	No. samples taken formally	No. samples taken informally
Milk	120	2	Fresh cream	2	—
Butter	26	—	Preserved cream	2	—
Vegets	15	—	Mustard	2	—
Coa	12	1	Borax	2	—
Margarine	12	1	Boracic acid	2	—
Self-raising flour	12	—	Tinned apricots	2	—
Condensed milk	12	—	Tinned pears	2	—
Usage	11	1	Castor oil	2	—
Coffee	9	—	Malt vinegar	2	—
Tea	7	—	Strawberry jam	2	—
Baking powder	7	—	Plum jam	2	—
Cheese	7	—	Raspberry & apple jam	1	—
Vegeterine	6	—	Blackcurrant jam	1	—
Beef dripping	6	—	Damson jam	1	—
Cryst. of tartar	5	—	Raspberry jam	1	—
Veget. oil	5	—	Bi-carbonate of soda	1	—
Imp. liquerice powder	4	—	Cod-liver oil	1	—
Evaporated milk	4	—	Lard	1	—
Maralade	4	—	Gregory powder	1	—
Ground rice	3	—	Separated milk	1	—
Honey	3	—			
Quinine tincture	3	—			
			Total	324	6

The total number of samples analysed during the year was 330.

Of the total number of samples analysed

24 samples of milk	1 sample of butter
3 " sausage	1 " ground rice
2 " fresh cream	1 " coffee
1 sample of preserved cream	1 " beef dripping
1 " margarine	1 " tinned apricots

There reported adulterated and proceedings were taken in respect of:—

19 samples of milk	1 sample of butter
1 sample of sausage	1 " coffee
1 " fresh cream	1 " beef dripping
1 " preserved cream	

With reference to the remaining samples reported adulterated the Health Committee, after consideration and hearing the vendors' explanation, decided that it was inadvisable to institute proceedings, and the vendors were subsequently cautioned.

Informal samples.—All the samples taken informally for analysis during the year were found pure, with the exception of sausage sample No. 68. A further sample was taken formally and this, on analysis, proved to be genuine.

Particulars of the defects found in those samples with regard to which proceedings were taken, and the result of the proceedings, are set out in Table F 4.

The composition of each sample of milk analysed during the year will be found in Table F 1.

TABLE F 4.

Samples with reference to which proceedings were taken.
Nature of adulteration and result of proceedings.

1921 Quarter ending	Article	No. of sample	Adulteration	Fine inflicted
Mar. 31	Sausage	18	10 per cent short of meat and containing an excess of added water	£2 including costs
June 30	Milk	63	6 per cent added water	Withdrawn on payment of costs 21/-
	Milk	69	6 per cent added water	£1 10/- including costs
	Milk	70	6 per cent added water	£1 10/- "
	Milk	85	14 per cent deficient in fat ...	£3 "
	Milk	88	20 per cent deficient in fat ...	£3 "
	Milk	99	3 per cent deficient in fat	£2 "
	Milk	116	35 per cent deficient in fat and 6 grs. boric acid per pint	£7 "
	Milk	128	5 per cent added water and coloured with annatto	Dismissed on warranty
	Milk	138	14 per cent added water and coloured with annatto	£3 including costs
	Milk	139	6 per cent added water, 20 per cent deficient in fat, and coloured with annatto	£5 "
Sept. 30	Milk	149	20 per cent added water ...	£1 10/- including costs
	Milk	150	10 per cent deficient in fat	£2 "
	Milk	158	8 per cent deficient in fat	£1 10/- "
	Milk	162	33 per cent deficient in fat	£1 10/- "
	Milk	164	24 per cent deficient in fat	£1 "
	Milk	182	7 per cent deficient in fat	£1 "
Dec. 31	Butter	186	18.63 per cent water	£3 including 26/- costs
	Coffee	198	20 per cent chicory	£2 including costs
	Presd. cream	234	0.70 per cent boric acid	£1 10/- including costs
	Fresh cream	265	0.22 per cent boric acid ...	£2 "
	Milk	267	4 per cent added water	£1 "
	Beef drip'ing	293	3.29 per cent water and 0.69 per cent substances other than fat	£1 "
	Milk	322	6 per cent added water	£1 "
	Milk	328	3 per cent added water ...	£2 "

TUBERCULOSIS.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Corporation for dealing with tuberculosis in the area include

(a) The provision of a dispensary or clinic, opened in 1913. (This clinic is used on one half-day each week in connection with cases from the area of the administrative county of Chester.)

(b) The provision of garden shelters (two) for suitable cases at a small rent.

(c) The retention since August, 1914, of twelve beds at Leasowe Hospital for cases of surgical tuberculosis in children.

(d) A joint arrangement with the Cheshire County Council, and the Councils of the County Boroughs of Wallasey, Chester, Stockport, and Stoke-on-Trent, for the provision of a sanatorium at Burntwood.

(e) The provision of a residential institution at Thingwall, Cheshire.

Staff.—The medical and health visiting staff for tuberculosis at the end of 1921 was as set out in the annual report of 1920, with the addition of Dr. Foster (who took up duty at the end of November, 1921).

The Corkhill Fund.—Under the will of the late Mr. John Lloyd Corkhill, of Oxtou, a sum of money was provided for the assistance of persons suffering from consumption. By arrangement with the trustees, persons applying for help from the charity are passed through the municipal clinic for classification; and the trustees have been largely guided by the recommendations of the medical staff of the clinic.

New arrangements made during past year.

Termination of sanatorium benefit.—On the 1st May, 1921, sanatorium benefit ceased to be included among the benefits conferred by Part I of the National Insurance Act, 1911 (National Health Insurance Act, 1920, sec. 4; Ministry of Health circular No. 158, 1st December, 1920).

From that date Insurance Committees ceased to have the duty of providing treatment for insured persons suffering from tuberculosis, except in so far as medical treatment and attendance are provided as part of *medical benefit* (under section 8 (1) (a) of the National Insurance Act, 1911, as interpreted by section 4 (3) of the National Health Insurance Act, 1920).

From that date also it rested with County and County Borough Councils to provide institutional treatment for such persons as well as for other members of the community.

All registers, case records, and other documents relating to the administration of sanatorium benefit have been transferred from the

offices of the Birkenhead Insurance Committee to the Medical Officer of Health.

Opening of Thingwall Sanatorium.—The first portion of the furnishing of Thingwall Sanatorium was completed in the latter part of the year, and the Sanatorium was opened for the reception of patients on November 4th. (See page 37.)

Arrangements proposed or contemplated.

Extension of arrangements for surgical tuberculosis.—Further consideration was given during the year to the scheme to which reference was made in the last annual report for additional accommodation for surgical tuberculosis at the Hospital for Children, Leasowe. After consultation with the Ministry of Health, however, it was decided not to proceed with the scheme at the present time.

PREVALENCE OF, AND MORTALITY FROM, TUBERCULOSIS.

Notifications.—The total number of primary cases of tuberculosis notified during 1921 was 268—190 pulmonary and 78 non-pulmonary. An analysis of these cases with reference to age and sex will be found in Table T 1 (page 37).

Mortality.—The total number of deaths certified as due to tuberculosis of patients who had previously been notified as suffering from the disease was 144—124 pulmonary and 20 non-pulmonary.

The total number of deaths certified as due to tuberculosis of patients who had *not* previously been notified as suffering from tuberculosis was 50—30 pulmonary and 20 non-pulmonary.

Adding these together, the total number of deaths certified as due to tuberculosis was as follows:—

Pulmonary	154
Non-pulmonary	40
Total	194

The number of deaths, certified as due to *other causes*, of patients who had previously been notified as suffering from tuberculosis was 4; the certified cause of death being acute croupous pneumonia 1, fracture of spine 1, pyonephrosis 1, lymphatic leukaemia 1.

An analysis of the tuberculosis mortality for the past ten years will be found in Table T 2 (page 37).

Number of known cases.—After making deductions for patients who had died during the year, or who had permanently left the district, or whose names have been taken off the register as provisionally cured (cases who have shown no signs or symptoms of active tuberculosis during two complete calendar years), the total number of known cases of tuberculosis in Birkenhead at the end of 1921 was as follows:—

	Insured persons		Dependents of insured person	Neither insured persons nor dependants	Total
	Ex-service men	Others			
Pulmonary.....Male.....	103	277	98	51	529
Female ...	—	110	58	192	360
Non-pulmonary...Male.....	5	35	166	5	211
Female ...	—	24	156	21	201
Total...Male.....	108	312	264	56	740
Female ...	—	134	214	213	561
Total	108	446	478	269	1301

Efficiency of system of notification.—As was stated in the last annual report the notification of tuberculosis is of comparatively little practical value unless cases are notified in the earliest stages of the disease.

Article V. of the Public Health (Tuberculosis) Regulations, 1912, provides that “. . . Every medical practitioner . . . attending on or called in to visit any person (whether at an institution or otherwise) shall, *within forty-eight hours* after first becoming aware that such person is suffering from tuberculosis ” (pulmonary or non-pulmonary) “ make and sign a notification of the case . . . and shall transmit the notification to the medical officer of health for the district within which the place of residence of the person is situate. . . . ”

An inquiry regarding the practical utility of these regulations as observed in Birkenhead was begun in 1920, and continued throughout last year. A summary of the facts relating to 1921 is given below:—

Of the 154 patients who died from pulmonary tuberculosis during 1921, those who had been notified

Over four years numbered ...	8 (5.2% of total)
Under “ “ “ “ ...	2 (1.3 “)
“ three years “ “ “ “ ...	9 (5.8 “)
“ two years “ “ “ “ ...	20 (13.0 “)
“ one year “ “ “ “ “ ...	10 (6.5 “)
“ six months “ “ “ “ “ ...	26 (16.9 “)
“ three months “ “ “ “ “ ...	21 (13.6 “)
“ one month “ “ “ “ “ ...	18 (11.7 “)
“ one week “ “ “ “ “ ...	10 (6.5 “)

and those who had not been

notified numbered 30 (19.5 “)

Thus only 48.1% of these cases—less than half—were notified to this department three months or more before death.

Of the 40 patients who died from non-pulmonary tuberculosis during 1921 those who had been notified

Over three years numbered	2 (5.0% of total)
Under three years “ “ “ “ ...	1 (2.5 “)
“ two years “ “ “ “ “ ...	1 (2.5 “)
“ one year “ “ “ “ “ “ ...	— (“)
“ three months “ “ “ “ “ “ ...	1 (2.5 “)
“ one month “ “ “ “ “ “ “ ...	2 (5.0 “)
“ one week “ “ “ “ “ “ “ “ ...	13 (32.5 “)

and those who had not been

notified numbered 20 (50.0 “)

It will be evident from the result of this investigation that only a small fraction of the cases of tuberculosis which occur in the Borough are notified at a sufficiently early date to allow of any effective steps being taken by the local authority in the direction of securing appropriate treatment.

CASES DEALT WITH THROUGH THE TUBERCULOSIS CLINIC.

Attendances of patients at the clinic.—During the year 1,051 patients paid 1,533 visits at the tuberculosis clinic. Of these 419 had not attended before; the remaining 632 had been to the clinic during the previous year.

Examination of patients notified for the first time during 1921.—Of the 268 new patients notified during 1921

- 154 had been sent down to the clinic by their own doctors for examination, and were subsequently notified;
- 16 were ex-service men referred to the clinic as tuberculous cases by the Ministry of Pensions;
- 98 were seen at the clinic after having been notified by their own doctors.

Classification of new cases.—The 419 new patients who attended during the year were classified as follows:—

		Insured		Dependent	Neither	Total
		Ex-service men	Others			
Classed as tuberculous.....	Males	13	38	35	13	99
	Females	—	14	37	38	89
Classed as non-tuberculous...	Males	14	44	58	2	118
	Females	—	6	47	18	71
Classed as "suspect"	Males	2	14	9	—	25
	Females ...	—	7	7	3	17
Total.....	Males	29	96	102	15	242
	Females	—	27	91	59	177
Total.....		29	123	193	74	419

Pensions cases.—Included in the 419 new patients were 29 patients examined for pensions purposes, with the following results:—

Found to be suffering from pulmonary tuberculosis	13
Classed as suspects	2
Found to be free from active tuberculosis	14
	—
	29
	—

In addition to the above 99 old cases were examined for pensions purposes.

Sanatorium benefit.—Between 1st January, 1921, and 30th April, 1921, 28 new cases were dealt with at the clinic, all of whom were found to be suffering from pulmonary tuberculosis.

Examination of contacts.—59 persons who had been in close contact with known cases of tuberculosis were examined either at the clinic or at their own homes. Of these, 6 were found to be suffering from pulmonary tuberculosis, 36 not suffering from tuberculosis, and 17 were classified as "suspect."

HOME VISITING, DISINFECTION, ETC.

During the year the health nurses paid 274 first visits and 2,919 re-visits to the homes of patients.

The number of houses disinfected after death or removal of patients was 157.

Spitting flasks were provided free of charge to 60 patients.

LEASOWE HOSPITAL.

Full use has been made during the year of the twelve beds reserved by the Corporation at Leasowe Hospital for cases of surgical tuberculosis among Birkenhead residents.

There were 11 cases in hospital at the beginning of the year; 12 new cases have been admitted during the year, and 11 have been discharged or died; leaving 12 patients in hospital at the end of December.

The localisation of the disease in the 24 patients under treatment during the year was as follows:—

Tuberculosis of cervical glands	4
" hip	4
" spine	3
" peritoneum	2
" knee	2
" neck glands	2
" elbow	1
" elbow and neck glands	1
" malar bone	1
" knee and wrist	1
" left femur	1
" face	1
	—
	23
	—

The 11 cases discharged or died were as follows:—

Tuberculosis of spine	3	cured
" neck glands	2	cured
" peritoneum...	1	removed by parents against Medical Officer's advice.
" cervical glands	1	quiescent
" elbow & neck glands	1	quiescent
" malar bone...	1	quiescent
" hip	1	quiescent
" peritoneum...	1	quiescent

THINGWALL SANATORIUM.

The sanatorium was opened for the admission of patients on the 4th November, 1921.

The furnishing of the sanatorium was carried out in two stages. Equipment for twenty patients was provided in the first instance, the remainder of the furnishing being left over until 1922 in anticipation of a probable fall in prices.

The sanatorium will ultimately contain 40 beds and 3 cots for patients.

During the two months for which the sanatorium was open 14 cases were admitted and 1 was discharged, leaving 13 under treatment at the end of the year. No report of any value can be made on the results obtained in this short period.

TABLE T 1.

New cases notified for first time during the year.

PRIMARY NOTIFICATIONS											
Age periods.....	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and up
Pulmonary—Males	—	1	3	4	6	7	27	29	12	8	1
Females	—	—	8	7	12	12	27	16	6	3	1
Non-pulmonary—Males.....	—	14	9	4	3	2	2	1	1	—	—
Females	3	11	12	6	3	2	2	2	—	—	1
Totals.....	3	26	32	21	24	23	58	48	19	11	3

TABLE T 2.

Deaths from tuberculosis during the past eleven years.

Year	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Deaths from tuberculosis of the lungs—											
Number	160	150	168	141	173	177	172	167	146	116	154
Rate per 1000..	1.21	1.12	1.23	1.02	1.23	1.24	1.18	1.13	0.97	0.76	1.04
A Males—											
Number	98	80	104	75	105	104	89	97	73	55	68
Rate	0.74	0.59	0.76	0.54	0.74	0.72	0.61	0.65	0.48	0.36	0.46
B Females—											
Number	62	70	64	66	68	73	83	70	73	61	86
Rate	0.47	0.52	0.47	0.47	0.48	0.51	0.57	0.47	0.48	0.40	0.58
Deaths from other forms of tuberculosis —											
A Males (all ages)											
Number	31	34	32	23	44	36	36	40	24	36	21
Rate.....	0.23	0.25	0.23	0.16	0.31	0.25	0.24	0.27	0.16	0.23	0.14
B Females (all ages)											
Number	20	23	27	23	23	25	33	26	14	20	19
Rate	0.15	0.17	0.19	0.16	0.16	0.17	0.22	0.17	0.09	0.13	0.13
C Children (un. 5 yrs)											
Number	36	35	39	27	42	44	44	36	22	26	17
Rate.....	0.27	0.26	0.28	0.19	0.29	0.30	0.30	0.24	0.14	0.17	0.11

VENEREAL DISEASES.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements for diagnosis and treatment of venereal diseases were referred to in the annual report for 1920. There was no change in these arrangements during the past year.

TREATMENT CARRIED OUT AT THE CLINIC.

During the year 1,161 persons were dealt with as out-patients at the clinic. These made 3,412 attendances.

The aggregate number of "in-patient" days was 1,039.

Full details are set out in Tables V 1 and V 2.

TREATMENT OF BIRKENHEAD PATIENTS CARRIED OUT AT OTHER TREATMENT CENTRES.

So far as has been ascertained from official returns which have been received from other areas, 18 Birkenhead patients attended other treatment centres as shown in Table V 3.

ISSUE OF SALVARSAN SUBSTITUTES.

Salvarsan substitutes were issued during the year by the Medical Officer of Health

To the Medical Officer of the treatment centre at the Borough Hospital

To the Medical Officer, Birkenhead Union Infirmary

To one approved local practitioner.

BACTERIOLOGICAL WORK.

Professor Beattie examined 708 specimens, 582 of these being sent from the clinic, and 126 from private medical practitioners. Of the specimens sent 699 were for the Wasserman reaction and 9 for the detection of gonococci.

PROPAGANDA.

The following lectures were given under the auspices of the Merseyside Boroughs Branch of the National Council for Combating Venereal Diseases, to which the Birkenhead Corporation pays an annual contribution:—

March 10th—Biological Film; lecturer, Dr. Mary Crawford.

March 11th—Story Film, "The Shadow"; lecturer, Dr. Dalzell.

March 17th—Purity Meeting; lecturer, Dr. Macalister.

October 27th—Three films on social and economic effects of V.D.; lecturer, Dr. J. E. Nevins.

All the above meetings were held at the Y.M.C.A. Hall, Grange-road. At these meetings pamphlets dealing with various aspects of the subject of venereal diseases were distributed.

TABLE V 1.

Statement showing the services rendered at the Venereal Diseases Clinic during the year, classified according to the diseases dealt with.

	Syphilis		Soft chancre		Gonorrhœa		Conditions other than venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of persons who, on the 1st January, 1921, were under treatment or observation for ...	392	64	6	—	190	23	18	5	606	92
2. Number of persons dealt with during the year in the out-patient clinic for the first time and found to be suffering from—										
Syphilis only	186	85	—	—	—	—	—	—	186	85
Soft chancre only	—	—	—	—	—	—	—	—	—	—
Gonorrhœa only	—	—	—	—	112	8	—	—	112	8
Syphilis and soft chancre	—	—	4	—	—	—	—	—	4	—
Syphilis and gonorrhœa	6	1	—	—	6	1	—	—	12	2
Gonorrhœa and soft chancre	—	—	1	—	1	—	—	—	2	—
Syphilis, soft chancre & gonorrhœa	—	—	—	—	—	—	—	—	—	—
Conditions other than venereal ...	—	—	—	—	—	—	17	35	17	35
Total—Item 2	192	86	5	—	119	9	17	35	333	130
Total—Items 1 and 2	584	150	11	—	309	32	35	40	939	222
3. Number of persons who ceased to attend the out-patient clinic										
(a) before completing the first course of treatment for	120	30	2	—	146	6	19	11	287	47
(b) after one or more courses, but before completion of treatment for	53	22	5	—	4	8	5	4	67	34
(c) after completion of treatment, but before final tests as to cure, of	1	2	—	—	1	—	—	2	2	4
4. Number of persons transferred to other treatment centres after treatment for	—	—	—	—	—	—	—	—	—	—
5. Number of persons discharged from the out-patient clinic after completion of treatment and observation for	—	—	—	—	—	—	—	—	—	—
6. Number of persons who, on the 1st January, 1922, were under treatment or observation for ...	410	96	4	—	158	18	11	23	583	137
Total—Items 3, 4, 5 and 6	584	150	11	—	309	32	35	40	939	222
7. Total attendances of all persons at the out-patient clinic who were suffering from	1611	632	20	—	982	69	44	54	2657	755
8. Aggregate number of "in-patient days" of treatment given to persons who were suffering from	557	276	—	—	58	148	—	—	615	424
9. Examinations of pathological material—										
(a) Specimens which were examined at, and by the medical officer of, the treatment centre					Spirochetes	Gonococci	Other organisms	For Wassermann reaction		
(b) Specimens from persons attending at the treatment centre, which were sent for examination to an approved laboratory					—	4	—	578		

TABLE V 2.

Statement showing the services rendered at the Venereal Diseases Clinic during the year, classified according to the areas in which the patients resided.

	Birkenhead	Liverpool	Wallasey	Cheshire	Lancashire	Chester	Isle of Man	London	South Shields	Ireland	Belfast	Total
A. Number of persons from each area dealt with during the year, at or in connection with the out-patient clinic <i>for the first time</i> , and found to be suffering from—												
Syphilis	256	1	6	11	1	1	—	—	1	—	1	278
Soft chancre	4	—	—	—	—	—	—	—	1	—	—	5
Gonorrhœa ...	112	—	4	6	1	—	1	1	2	1	—	128
Conditions other than venereal...	52	—	—	—	—	—	—	—	—	—	—	52
Total	424	1	10	17	2	1	1	1	4	1	1	463
B. Total number of attendances at the out-patient clinic of all patients residing in each area	3168	4	67	116	45	5	1	1	2	1	2	3412
C. Aggregate number of "in-patient days" of all patients residing in each area	989	—	—	34	16	—	—	—	—	—	—	1039
D. Number of doses of salvarsan substitutes given in the—												
1. Out-patient clinic	2183	4	58	96	43	4	—	—	1	—	—	2389
2. In-patient department	—	—	—	—	—	—	—	—	—	—	—	—
to patients residing in each area												

The salvarsan substitutes used in the treatment of syphilis are—

Novarsenobillon—Initial dose, '3 gms. Final dose, '9 gms.
 Galyl....., 10 cgs. „ 30 cgs.

TABLE V 3.

Statement showing particulars of Birkenhead cases treated at Venereal Diseases Clinics in other areas.

Name of town	No. of patients	Disease	Attendances at out-patient clinic	No. of in-patient days	Doses of salvarsan substitutes given in	
					Out-patient clinic	In-patient department
Liverpool ... (David Lewis Northern Hos.)	10	Syphilis 6 Gonorrhœa 3 Conditions other than venereal 1	211	—	51	—
Liverpool (Royal Southern Hospital)	7	Syphilis 1 Gonorrhœa 6	99	—	27	—
Wallasey	1	Syphilis 1	5	—	—	—

OTHER INFECTIOUS DISEASES.

INFECTIOUS DISEASES WHICH ARE NOTIFIABLE.

The infectious diseases which (in addition to tuberculosis, already dealt with) were compulsorily notifiable to the Medical Officer of Health at any time during the past year are as follows:—

Smallpox.
Scarlatina.
Diphtheria and membranous croup.
Erysipelas.
Typhus fever.
Typhoid fever.
Continued fever.
Relapsing fever.
Cerebro-spinal meningitis.
Acute encephalitis lethargica.
Acute polio-encephalitis.
Acute poliomyelitis.
Puerperal fever.
Ophthalmia neonatorum.
Cholera.
Pneumonia (acute primary and influenzal).
Malaria.
Dysentery.
Trench fever.

Cases notified in 1921.—During the year 748 cases of infectious diseases other than tuberculosis were notified to me. These are set out in Tables I 1 and I 2.

TABLE I 1.

Infectious diseases other than tuberculosis notified during 1921;
showing seasonal incidence.

Disease	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Smallpox	—	2	—	3	4	1	—	—	—	—	—	—	10
Scarlatina	34	46	24	27	28	32	29	23	31	17	20	26	337
Diphtheria and membra- nous croup	12	13	28	10	10	10	5	8	12	14	9	16	147
Erysipelas	6	3	3	5	3	3	3	5	2	10	7	5	55
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever	1	1	1	—	—	—	—	—	1	2	3	1	10
Continued fever... ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	—	—	—	—	—	—	—	—	1	—	—	1
Encephalitis lethargica (acute)	—	—	—	2	1	—	—	—	—	—	—	—	3
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute) ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	—	1	—	—	1	2	1	1	1	—	—	1	8
Ophthalmia neonatorum	1	3	3	6	2	3	1	5	1	1	—	1	27
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	17	12	17	7	9	11	7	1	7	9	24	22	143
Malaria	1	—	—	3	—	—	—	1	—	—	—	—	5
Dysentery	—	—	—	—	2	—	—	—	—	—	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	72	81	76	63	60	62	46	44	55	54	63	72	748

TABLE I 2.

Infectious diseases other than tuberculosis notified during 1921;
showing ages.

Disease	und. 1 yr.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-35 yrs.	35-45 yrs.	45-65 yrs.	65 yrs. up	Total
Smallpox	—	—	—	—	—	—	—	—	2	2	5	1	10
Scarlatina	3	7	16	17	23	141	67	24	34	5	—	—	337
Diphtheria and membranous croup	2	3	8	8	14	60	28	8	12	4	—	—	147
Erysipelas	1	—	1	—	—	1	3	4	7	10	24	4	55
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever	—	—	—	—	1	—	—	1	5	1	2	—	10
Continued fever.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	—	1	—	—	—	—	—	—	—	—	—	1
Encephalitis lethargica (acute).....	—	1	—	1	—	—	—	—	1	—	—	—	3
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute).....	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	—	—	—	—	—	—	—	—	7	1	—	—	8
Ophthalmia neonatorum	27	—	—	—	—	—	—	—	—	—	—	—	27
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia.....	13	24	13	7	6	17	6	6	12	15	21	3	143
Malaria	—	—	—	—	—	—	—	—	5	—	—	—	5
Dysentery	—	—	—	—	—	—	—	—	2	—	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	46	35	39	33	44	219	104	43	87	38	52	8	748

Cerebro-spinal fever.—1 case was notified during the year, a male, 2 years of age. This case was treated at home, and subsequently died. Diagnosis was not corroborated by bacteriological examination.

Encephalitis lethargica.—3 cases were notified during the year, viz.:—

Male, 32 years of age, treated at the Infectious Diseases Hospital, Birkenhead; recovery resulted.

Female, 18 months of age; treated at the Royal Liverpool Children's Hospital, Liverpool; recovery reported.

Female, 3½ years of age; treated at home, and subsequently died.

Smallpox.—Of this disease 10 cases were notified during the year, and information regarding 1 other case (unnotified) was obtained. The 10 notified patients were removed to hospital, recovery resulting in each case. All contacts were followed up and vaccinated, the Public Vaccinators giving every assistance in this connection.

The first case (S.H., male, age 51) was notified on 18/2/21, and had at this time been ill for 6 days. He kept a hairdresser's shop; the possibility of infection having been disseminated was therefore very great. Twelve days before the onset of his illness a seafaring nephew had come to stay with him. This man, who had been discharged from his vessel at Glasgow, returned to his home in Denmark on the 11th February (the day before S.H. fell ill). His vessel had been at Gibraltar on the 20th January, and had previously touched at other Mediterranean ports. It is at least possible that infection may have reached S.H. from this man.

The cases with their dates of onset and notification are set out below.

Case	Age and sex	Date of onset	Date of notification	Notes
1 (S. H.)	51 (M)	12/2/21	18/2/21	Hairdresser
2 (T. S.)	55 (M)	19/2/21	24/2/21	Residence close to that of No. 1
3 (A. N.)	68 (M)	24/3/21	1/4/21	No connection traced to previous cases
4 (M. L. M.)	23 (F)	10/4/21	18/4/21	Married daughter of No. 3. Information regarding this woman having been in contact with No. 3 was suppressed, probably because she was pregnant. Her child was born prematurely in hospital, and died
5 (C. E. M.)	15 (M)	3/4/21 (?)	Not notified	Messenger for shipping firm, whose offices are frequently visited by lascar seamen
6 (A. L. M.)	33 (F)	19/4/21	25/4/21	Mother of No. 5
7 (W. W.)	52 (M)	3/5/21	8/5/21	No contact traced with previous cases
8 (R. P.)	41 (M)	3/5/21	10/5/21	No contact traced with previous cases
9 (E. A. P.)	40 (F)	15/5/21	19/5/21	Wife of No. 8
10 (F. A. H.)	52 (F)	21/5/21	28/5/21	Had been in contact with No. 7
11 (S. R.)	64 (F)	9/6/21	14/6/21	Residence close to those of Nos. 7 and 10

NON-NOTIFIABLE INFECTIOUS DISEASES.

Influenza.—The mortality from influenza and pneumonia, week by week, together with the general mortality, is shewn in Table I 3.

TABLE I 3.
Mortality from influenza and pneumonia.

1921 Week ending	Total No. of deaths registered	Deaths from influenza	Deaths from pneumonia (all forms)	1921 Week ending	Total No. of deaths registered	Deaths from influenza	Deaths from pneumonia (all forms)
Jan. 7.....	33	1	2	July 8.....	27	—	3
14.....	43	—	8	15.....	35	—	3
21.....	28	—	2	22.....	35	—	3
28.....	29	—	1	29.....	34	—	1
Feb. 5.....	39	—	8	Aug. 5.....	36	—	2
12.....	38	—	2	12.....	28	—	—
19.....	45	—	3	19.....	29	—	—
26.....	40	1	—	26.....	30	—	2
Mar. 4.....	42	2	6	Sept. 2.....	27	—	3
11.....	32	—	2	9.....	31	—	1
18.....	33	1	3	16.....	30	—	3
25.....	30	—	2	23.....	33	—	3
April 1.....	50	—	3	30.....	32	—	2
8.....	39	—	3	Oct. 7.....	37	—	2
15.....	24	—	3	14.....	34	—	2
22.....	22	1	—	21.....	24	—	1
29.....	25	—	1	28.....	28	—	2
May 6.....	36	—	5	Nov. 4.....	29	—	2
13.....	30	1	2	11.....	36	—	3
20.....	35	—	2	18.....	41	—	3
27.....	26	—	1	25.....	35	—	2
June 3.....	22	—	1	Dec. 2.....	40	—	4
10.....	37	—	2	9.....	35	1	2
17.....	23	1	2	16.....	37	—	7
24.....	32	—	4	23.....	31	—	4
July 1.....	33	1	2	31.....	36	2	4
				(8 days)			

Anthrax.—From information received it was found that a number of shaving brushes which were possibly infected with anthrax had been introduced into the Borough; and that they were being exposed for sale in various shops.

With a view to protecting the health of the public 86 visits were made to these shops by members of the staff and 9 supposed infected shaving brushes were received from various shopkeepers.

VACCINATION.

The following is the latest completed information relative to vaccination in the Borough and relates to the period 1st January, 1920, to 31st December, 1920, viz.:—

No. of births	4321
Successfully vaccinated	3069
Insusceptible	25
Had smallpox	—
Number in respect of whom statutory declarations of conscientious objection have been received	711
Died unvaccinated	308
Postponed by medical certificate	44
Removed to districts the vaccination officers of which were duly notified	58
Removed to places unknown or which cannot be traced	41
In abeyance	65

DISINFECTION.

Books.—66 Public Library and 1 school library books were collected from infected houses and disinfected, and one library book was destroyed.

Dwellings.—341 house-disinfecting notices were served, 521 houses or parts of houses were disinfected during the year.

Bedding and clothes.—Infected bedding and clothes were collected from 824 dwellings and disinfected at the disinfecting station. In 234 further cases infected or discarded bedding and clothes were destroyed.

Visits and revisits paid to houses, etc., by Disinfecting Inspector.—Inspector Isaac Taylor paid 5,328 visits and revisits to property during the year in connection with disinfection after infectious diseases (including tuberculosis).

Cleansing of persons.—A special bath is provided at the disinfecting station in Corporation Road for dealing with persons under the Cleansing of Persons Act, 1897. During the year no cases were dealt with.

ISSUE OF DIPHTHERIA ANTITOXIN.

During the year in accordance with the provisions of the Diphtheria Antitoxin (outside London) Order, 1910, diphtheria antitoxin was issued to 19 medical practitioners; 42 phials of 2,000 units each being given out, a total of 84,000 units.

THE INFECTIOUS DISEASES HOSPITAL.

Accommodation and staff.—There has been no addition to the number of beds in the hospital during the year. The full staff consists of the Matron (Miss Emily Yeomans), 20 nurses, 20 female servants, a boilerman, 1 porter and 2 gardeners.

Cases treated during 1921.—At the beginning of the year there were 29 patients in hospital. New cases admitted during the year numbered 366, making a total of 395 patients dealt with.

The diseases treated, together with the sex of the patients and particulars as to recoveries and deaths, are shewn below.

TABLE I 4.

Patients sent in as suffering from	In hospital at beginning of year	Admitted during year	Died during year	Discharged cured during year	Remaining in hospital at end of year
Scarlet fever M.	9	107	2	108	6
..... F.	10	144	4	134	16
Diphtheria M.	5	47	5	43	4
..... F.	3	59	5	51	6
Enteric fever M.	1	1	—	2	—
..... F.	1	6	—	7	—
Encephalitis lethargica M.	—	1	—	1	—
..... F.	—	1*	1	—	—
Total	20	366	17	346	32

*This patient was sent in to hospital for observation as a case of encephalitis lethargica; but proved to be a case of cerebral hæmorrhage.

E. P. Smith memorial fund.—One suitable case received benefit from this fund during 1921.

HOME NURSING.

An arrangement made between the Corporation and the Birkenhead District Nursing Society, dating from 1st July, 1919, provides for the home nursing of cases of influenza and pneumonia. During the year 1921 the Society's nurses paid 956 visits in respect of 71 cases.

MUNICIPAL LABORATORY.

The nature and number of the examinations, etc., made at the Municipal Laboratory during 1921 is shown in the following table:—

Examination	Pos.	Neg.	Total
Sputum for B. tuberculosis	98	283	381
Peritoneal exudate for B. tuberculosis	—	1	1
Pus for B. tuberculosis.....	—	1	1
Pleural exudate for B. tuberculosis	—	1	1
Deposit from pleural exudate for B. tuberculosis	—	1	1
Pleuritic fluid for B. tuberculosis	1	—	1
Cultures for B. diphtheriæ	55	161	216
Smear for B. diphtheriæ	—	1	1
Widal against B. typhosus	3	2	5
	157	451	608

MENTAL DEFICIENCY.

ADMINISTRATIVE ARRANGEMENTS.

The work of dealing with cases of mental deficiency in the Borough in accordance with the provisions of the Mental Deficiency Act, 1913, is carried out under the Mental Deficiency Committee, with the Town Clerk as clerk to the committee.

Mentally defective children between the ages of 7 and 16 are dealt with by the Education Committee under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914.

At the end of 1921 the medical staff engaged on the work of ascertainment of cases, certification, etc., consisted of the Medical Officer of Health and Assistant Medical Officers; and 14 nurses gave part time to home visiting.

CASES DEALT WITH UNDER MENTAL DEFICIENCY ACT, 1913.

During the year 31 new cases were reported; bringing the total number of cases dealt with under the Mental Deficiency Act, 1913, since that Act came into force, to 176.

1 case was sent into an institution as an "election" patient.

6 cases were placed under supervision pending institutional vacancy arising; 3 cases were placed under home supervision; 23 cases were admitted to the workhouse as poor law cases.

3 cases died during the year.

32 first visits and 440 revisits were paid to the homes of mental defectives by the health nurses.

CASES DEALT WITH UNDER THE ELEMENTARY EDUCATION (DEFECTIVE AND EPILEPTIC CHILDREN) ACTS, 1899 and 1914.

Reference to this subject will be found in the school medical inspection section of this report (page 77).

HOUSING AND GENERAL SANITATION.

STAFF.

The staff engaged on the work of housing inspection consisted, in addition to the Chief Inspector, of one general housing inspector and four district sanitary inspectors, who act as housing inspectors in the districts allotted to them.

NUMBER OF DWELLING HOUSES, ETC., IN BOROUGH.

At the time of the 1901 census the number of inhabited houses was 19,744, giving an average number of persons per house of 5.6; the number of houses in the Borough at the time of the 1911 census was 24,343, giving an average number of persons per house of 5.3.

The approximate number of dwelling houses of all descriptions within the Borough, including institutions, at 31st December, 1921, was 27,146.

The approximate number of schoolrooms, warehouses, etc., was 1,404.

NEW HOUSES ERECTED AND INSANITARY HOUSES DEMOLISHED.

During 1921, 167 new houses were erected in the Borough, 151 of which were erected under the Corporation's housing schemes. The figures for the past eight years are as follows:—

	Erected	Demolished
January 1st to December 31st, 1914	246	18
" 1915	136	32
" 1916	28	1
" 1917	1	18
" 1918	Nil	36
" 1919	Nil	7
" 1920	112	1
" 1921	167	—
	690	113

The number of houses not complying with the building byelaws erected with the consent of the local authority under Section 25 of the Housing, Town Planning, etc., Act, 1919, was 151.

UNINHABITED PROPERTY.

The following is a return of uninhabited property in Birkenhead for the past year:—

District	Half-year ended 30th June, 1921					Half-year ended 31st Dec., 1921				
	Private houses	Shops	Cottages	Dock cottag's	Total	Private houses	Shops	Cottages	Dock cottag's	Total
Birkenhead.....	9	2	3	—	14	10	5	1	—	16
Cloughton and Oxtan	48	1	3	64	116	38	2	3	64	107
Tranmere and Bebington ...	16	4	—	—	20	24	4	—	—	28
Totals ..	73	7	6	64	150	72	11	4	64	151

The total uninhabited and unoccupied property, 31st December, 1920, was 158, so that there was a decrease of 7 at the end of 1921 as compared with the previous year.

STEPS TAKEN UNDER HOUSING ACTS.

During the twelve months ending December 31st, 1921, a large amount of work was carried out by the department under the provisions of the various Housing Acts, and the regulations made by the Local Government Board dated 2nd September, 1910. The particulars of this work are as follows:—

Inspection.

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	678
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	678
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	—
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	318

Remedy of defects without service of formal notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the local authority or their officers	2
---	---

Action under statutory powers.

A. *Proceedings under section 28 of the Housing, Town Planning, etc., Act, 1919.*

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	316
(2) Number of dwelling-houses which were rendered fit—	

(a) by owners	281
(b) by local authority in default of owners	—
(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close	—

B. *Proceedings under Public Health Acts.*

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	313
(2) Number of dwelling-houses in which defects were remedied—	
(a) by owners	290
(b) by local authority in default of owners	—

No proceedings were taken during the year under sections 17 and 18 of the Housing, Town Planning, etc., Act, 1909; and no unhealthy areas were represented.

OTHER WORK IN CONNECTION WITH HOUSING AND GENERAL SANITATION.

In addition to the housing work outlined above, other work, of which the following is a summary, was carried out during the year. (The work of scavenging, removal of refuse, flushing of drains, and care of sewers is entirely dealt with by the Borough Surveyor's department.)

Number of unhealthy conditions reported and investigated	7641
Number of formal notices given	3306
Number remedied after formal notice and without proceedings	3306
Number of cases in which proceedings had to be taken	—
Number abated after proceedings	—
Defects referred for action:—	
(a) to Borough Surveyor	304
(b) to Water Engineer	293
(c) to Borough Treasurer	36
(d) to Education Secretary	23
(e) to West Cheshire Water Co.	7
Number of excavations made for the purpose of testing the condition of house drains	45
Number of smoke tests applied to drains of premises reconstructed under the supervision of this department	47
Number of water tests applied to drains	50
Number of smoke tests applied to the drains of new buildings, in conjunction with the Borough Surveyor's department	12
Smoke nuisances from factory and other chimneys ...	1
Number of schools specially examined by the district inspectors	36

Visits to premises.—During the year 22,412 visits were paid by the inspectors, as follows:—

Inspector A. Longstaff (Special Housing Inspector) ...	4331
„ J. Croshaw	4689
„ J. Lee	4132
„ H. T. Taylor	3809
„ W. H. Tilston	5451

22,412

Increase of Rent and Mortgage Interest (Restriction) Act, 1920.—

This Act came into operation on the 2nd July, 1920, and continues in force until the 24th June, 1923.

During the year 121 applications for certificates under section 2 of the Act were received and considered by the Health Committee. 118 certificates were granted and 3 refused.

Enquiries were subsequently made in order to keep a record of the work carried out after the granting of the certificates. 562 revisits were paid in this respect, and in 62 instances the whole of the defects stated in the certificates had been remedied and the houses put into a satisfactory state of repair.

Theatres, music halls, &c.—Ministry of Health Circular No. 120, (dated 25th August, 1920.) 25 visits were made to theatres, music halls and other places of entertainment in which the conditions as to ventilation, structure of dressing rooms, &c., had been found not to be satisfactory and which were reported upon to the Health Committee and the Clerk to the Borough Justices for the information of the licensing authorities in October, 1920.

Rats and mice.—The following is a summary of the work carried out by the district inspectors under the provisions of the Rats and Mice (Destruction) Act, 1919.

No. of premises inspected	184
No. of visits and revisits	528
No. of notices served	54
No. of premises satisfactorily dealt with	69
No. of premises still under observation or where work is being carried out	22

INSPECTION OF LODGING HOUSES, ETC.

During the year the inspector of common lodging houses, etc., paid regular visits to common lodging houses, and houses let in lodgings, and to the Corporation tenement dwellings. The following is a summary of the work done:—

Registered common lodging houses (17 in number):

Day inspections	2469
Night inspections	234
Insanitary conditions reported and dealt with	12

Houses let in lodgings (778 in number):

Day inspections	1192
Night inspections	—
Insanitary conditions reported and dealt with	101

Corporation tenement dwellings (132 in number, visited weekly): No. of visits	6864
Insanitary conditions reported and dealt with	161

NOTE.—On 109 days during the year the Inspector of Common Lodging Houses was called upon to assist or carry out the duties of the Disinfecting Inspector.

SHOPS, FACTORIES, AND WORKSHOPS.

SHOPS ACTS, 1912—1921.

Shops (Early Closing) Act (1920) Amendment Act, 1921.—On the 19th August, 1921, the "Shops (Early Closing) Act (1920) Amendment Act, 1921," came into operation.

This Act extends the hours during which fruit, table waters, sweets, chocolates, or other sugar confectionery, or ice cream, may be sold to the public to 9-30 p.m. on weekdays other than Saturdays and to 10 p.m. on Saturdays.

Petition from dealers in fruit, vegetables, fish, &c.—On the 12th November, 1921, a petition was received from the retail traders in fruit, vegetables, fish, game, poultry, and rabbits, within the Borough asking that a closing order should be made under the Shops Act, 1912, regarding their trade. A register of dealers in these commodities was compiled of the 213 shopkeepers who would come within the provisions of the order, if made, and was completed on the 7th December, 1921.

Visits paid.—The total number of visits paid to the various shops in the Borough under the provisions of the above Acts, and Orders made thereunder, during the year was 5,275.

Infringements reported and proceedings taken.—31 infringements were reported and 12 letters of warning sent in connection therewith. In 15 cases proceedings were taken for failing to close shops for the sale of certain articles on the weekly half-holiday, and fines of 10/-, 14/-, 14/-, 6/-, 10/-, 10/-, 10/-, 10/-, 8/-, 10/-, 14/-, 60/-, 14/-, 10/- and 20/-, including costs, were imposed.

POISONS AND PHARMACY ACT, 1908, AND ORDERS, 1909.

Visits were made to 25 shops and premises in the Borough in which insecticides containing poison were likely to be kept for sale. Only 2 shops were found where poisonous insecticides were sold and both retailers were in possession of licenses.

FACTORY AND WORKSHOP ACTS, 1901 AND 1907.

Inspection.—2,198 inspections were made during the year—factories 19, workshops 2,091, workplaces 88.

13 written notices were sent in respect of workshops.

There were no prosecutions during the year.

Defects.—The defects found in factories, workshops and workplaces were as follows:—

	No. of defects			Number of prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Want of cleanliness	16	16	—	—
Other defects (P. H. Acts) ..	6	6	—	—
Sanitary accommodation—				
Insufficient ..	1	1	—	—
Unsuitable or defective ..	22	22	—	—
Not separate for sexes ..	—	—	—	—
Breach of special sanitary requirements for bakehouses ..	61	61	—	—
Other offences (F. & W. Acts) ..	7	7	6	—
Total.....	113	113	6	—

Home work.—Lists were received from employers as follows:—

From employers sending twice in the year—14 lists (8 contractors, 18 workmen).

From employers sending once in the year—11 lists (3 contractors, 15 workmen).

In each case the work handled was the making of wearing apparel.

Registered workshops.—The workshops on the register at the end of the year were:—

Bakehouses	60
Confectioners	49
Laundries	42
Other workshops	339
Workplaces	20
	510

Other matters.—During the year 6 instances of failure to affix the abstract of the Factory and Workshop Acts were dealt with.

At the end of the year there were 26 underground bakehouses in use in the Borough.

RAG FLOCK ACT, 1911.

Pursuant to the provisions of the above Act, 80 visits were made.

At the time of these visits the rag flock being used or stored on the premises was to all appearance in a satisfactory condition; no samples were, therefore, taken for the purpose of analysis.

MATERNITY AND CHILD WELFARE.

The essential objects of the maternity and child welfare work of local authorities are

- (1) the prevention of mortality, and
- (2) the maintenance of health

among expectant and nursing mothers, and children up to five years of age.

It is common knowledge that, in the past, there has been much wastage of life which might have been prevented, and much of the suffering, incapacity, and consequent economic loss which first attracts attention in later life is traceable to causes operating before and shortly after birth.

The subject of the infant mortality rates in Birkenhead is dealt with in another section of this report (see page 7). During 1921, 289 children died in the Borough before reaching the age of one year; this corresponded to an infant mortality rate of 75 per 1,000 births. It is interesting to note that the corresponding rates for 1911 and 1901 were 136 and 179 per 1,000 births. Had the 1901 infant mortality rate prevailed last year the deaths not of 289 but of 690 infants would have been recorded. In other words, the reduced mortality corresponded to a saving of 400 infant lives in the year.

ADMINISTRATIVE ARRANGEMENTS.

Arrangements have been made by the local authority for carrying out the provisions of:—

1. The Notification of Births Acts, 1907 and 1915.
2. The Midwives' Acts, 1902 and 1918.
3. The Maternity and Child Welfare Act, 1918.

The authority's scheme now includes:—

1. Inspection of midwives practising in the area.
2. Health visiting.
3. The provision of three post-natal clinics.
4. The provision of an ante-natal clinic.
5. The supply of free milk, etc., for necessitous mothers and infants.
6. Home visiting in connection with cases admitted to the Birkenhead Day Nursery.
7. The provision of 4 beds at the Birkenhead Borough Hospital for cases referred from the clinics.
8. The provision of 3 beds at the Leasowe Hospital Baby Annexe for wasting infants.
9. The provision of home nursing for children under five suffering from certain diseases, and for expectant and nursing mothers.
10. Financial support of certain institutions engaged in work in the interests of mothers and infants belonging to the Borough, namely, St. Paul's Eye Hospital, Birkenhead Day Nursery, Birkenhead and District Rescue Association, The Birkenhead and Wirral Invalid Children's Association, and The Birkenhead Maternity Hospital.

The infant welfare or post-natal clinics are held at Hamilton Square, Brassey Street, and St. Paul's Road. The Hamilton Square clinic was opened in 1916; the other two clinics in 1919.

The ante-natal clinic, which is held at No. 9, Hamilton Square, was opened in 1920.

The arrangements for home nursing came into force on 1st July, 1919. An agreement between the Corporation and the Birkenhead District Nursing Society provides for the nursing at home of cases of ophthalmia neonatorum; of measles, whooping cough, epidemic diarrhoea, and poliomyelitis in children under the age of five years; and of illnesses of women associated with pregnancy and confinement.

New arrangements made during past year.

Maternity bags.—As was stated in the annual report for 1920, the home circumstances in a considerable number of confinements attended by midwives in the Borough are such that proper provision for the confinement cannot be made. During the past year the Maternity and Child Welfare Committee decided to provide four outfits to be kept at the clinics and loaned out to cases of this description.

The outfits consist of the following articles: 3 sheets, 2 pillow slips, 2 towels, 2 mother's binders, 2 mother's nightdresses, 2 child's nightdresses, 2 flannel back-wrappers, 4 napkins, 2 flannel vests, 2 flannel binders.

A payment of 5s. is required before each outfit is issued. All the articles, with the exception of the last three items, which may be retained, must be returned in good condition within one month.

Sewing classes.—A sewing class was opened at the Hamilton Square clinic in October, 1921. Here instruction is given every Thursday afternoon to young mothers and expectant mothers in the cutting out of garments. Model garments are demonstrated at this clinic and also at Brassey Street and St. Paul's Road. This work has been much appreciated and is likely to prove of great practical value.

Issue of silver nitrate to midwives.—With the object of providing an additional safeguard against ophthalmia neonatorum, supplies of a colloid preparation of silver nitrate were issued on application during the past year at cost price to midwives practising in the Borough.

Lectures to midwives.—A summer course of post graduate lectures to midwives was arranged by the Maternity and Child Welfare Committee and held during the months of May, June, and July.

The lectures were delivered in the Lecture Room of the Public Library on Friday afternoons at 3 p.m. No charge was made for the course. The total attendances numbered 516, an average of 43 per session. The subjects dealt with were the following:—

" The Pelvis, Normal and Abnormal "	Dr. C. L. Forde
" Obstetrical Diagnosis "	"
" Face and Breech Presentations "	"
" Diseases of Pregnancy "	Dr. W. A. Pierce
" The Kidneys in Pregnancy "	Dr. J. Ratcliff-Gaylard
" Abnormal Uterine Action "	"

" Slow Dilatation of the Soft Parts "	Dr. J. Ratcliff-Gaylard
" Ante- and Post-partum Hæmorrhage "	"
" Puerperal Sepsis "	Dr. Mary A. S. Deacon
" Venereal Diseases (Maternal and Infantile) "	Dr. W. R. Dalzell
" Infant Feeding "	Dr. C. S. Brewer
" Diseases of the Infant "	Dr. A. Dingwall Fordyce

Further arrangements contemplated or suggested.

Dental treatment.—As was pointed out in the Annual Report for 1920, cases frequently arise where mothers or expectant mothers attending the clinics are found to be in a subnormal state of health which is directly traceable to extensive dental disease. It is to be hoped that the Maternity and Child Welfare Committee will be able, through the co-operation of the Education Committee, to arrange for the treatment of selected necessitous cases at the dental clinic which has been established at 58, Mount Grove.

Extension of post-natal clinics.—The congestion at the three existing post-natal clinics has been increasingly felt during the past year. There is clear indication of the need for further provision, and it is hoped that this will be made at an early date at the Mount Grove clinic premises, which are in many ways well adapted for the purpose.

Maternity hospital provision.—The shortage of maternity hospital accommodation in the Borough was referred to in detail in the last annual report. While this is a matter which probably cannot adequately be dealt with at the present time, it is one of great importance and urgency and should not be overlooked.

Staff.—The executive medical staff engaged on maternity and child welfare work during the year consisted of Dr. Brewer, who has carried on the post-natal clinics; and Dr. Deacon, who has given one afternoon per week to the ante-natal clinic.

In addition to the Chief Health Nurse and the Inspector of Midwives the equivalent of the whole time of six nurses was, at the end of the year, available for this work.

INSPECTION AND SUPERVISION OF MIDWIVES.

Work under this section is concerned with the administration of the Midwives' Acts, 1902 and 1918; the visiting of the homes of midwives, inspecting their instruments, etc., advising them on the details of their work and on their duties as set out in the above Acts, and in the rules issued by the Central Midwives' Board.

Number of midwives.—During the year 1921, 84 midwives entered their names on the local register as practising in the Borough. Of these, 13 subsequently left the district, and their names have been removed from the register accordingly. 4 midwives gave notice of change of

addresses, and one had her name removed from the roll at her own request. 1 Birkenhead midwife died during the year.

Of the 84 midwives, 74 were trained and 10 untrained.

Number of cases attended by midwives.—The cases attended by midwives alone (no doctor being in attendance) numbered 2,809; approximately three-quarters of the total births in the Borough.

Visits of inspection.—The inspector of midwives paid 113 quarterly and 116 special visits of inspection.

Interviews in office.—43 midwives were interviewed during the year.

Complaints against midwives.—Complaints against midwives received numbered 5. These were investigated by the inspector.

Cases of puerperal fever in practice of midwives.—The inspector investigated 8 cases.

Cases requiring medical help.—419 cases were notified by midwives in which medical aid had been called in, as against 483 last year. The inspector made 277 special inquiries regarding cases requiring medical help.

Supply of silver nitrate to midwives.—Supplies of a colloid preparation of silver nitrate were issued to sixteen midwives at cost price.

HOME VISITING OF EXPECTANT MOTHERS, MOTHERS, AND YOUNG CHILDREN.

Home visiting.—The following is a summary of the visits paid by the health nurses in connection with expectant mothers, mothers, and young children:—

- 3147 routine first visits were paid to infants
- 8751 routine revisits were paid to infants under one year
- 10731 routine visits were paid to children over 1 year and under 5 years old.
- 51 first visits and 29 revisits were paid in connection with the investigation of stillbirths
- 272 visits were paid in connection with cases of pneumonia
- 27 cases of ophthalmia neonatorum were visited and kept under supervision.
- 150 first visits were paid to expectant mothers
- 183 revisits were paid to expectant mothers
- 51 visits were made in connection with deaths of infants
- 18 special inquiries were made in connection with cases for admission to the Day Nursery

Cases reported for special action.—The following cases after being visited were reported for special action:—

- 73 cases of sanitary defects in houses were passed to the Chief Sanitary Inspector
- 5 cases were referred to the Charity Organisation Society
- 4 cases were reported to the Society for the Prevention of Cruelty to Children
- 6 cases were referred to the Invalid Children's Association
- 7 cases were referred to the Poor Law Relieving Officers

POST-NATAL CLINICS.

At the end of the year the clinics were being held as follows:—

Hamilton Square clinic: Monday and Wednesday afternoons, 2 to 5 p.m.

Brassey Street clinic: Thursday afternoon, 2 to 5 p.m.

St. Paul's Road clinic: Tuesday afternoon, 2 to 5 p.m.

The following table gives an indication of the work done at the clinics during the year:—

	Hamilton Square (99 sessions)		Brassey Street (47 sessions)		St. Paul's Road (48 sessions)	
	1st visits	Revisits	1st visits	Revisits	1st visits	Revisits
Attendances made by infants under 12 months	583	5088	283	3020	309	2793
Attendances made by children aged 1—2 years	34	881	26	509	16	527
Attendances made by children aged 2—5 years	3	20	—	76	—	7
Children examined by Doctor ..	412	1699	191	881	208	790
Mothers advised by Doctor regarding their own health ...	41	54	20	37	23	22

Voluntary Workers.—Throughout the year the voluntary helpers have given their services ungrudgingly to the clinics and have contributed to a very great extent to their success. It would be difficult to over-estimate the value of this assistance and of the keenness and enthusiasm which prompts it.

Sewing classes.—These classes were commenced in October, and six meetings were held before the end of the year.

Supply of Milk.—Dried milk was sold at the clinics to suitable cases.

During the year supplies of milk were given free under the Milk (Mothers and Children) Order, 1919, to

- 40 expectant mothers
- 213 nursing mothers
- 267 children.

The income scale set out in the annual report for 1920 was in force during the first half of the year. A revised scale, as set out

below, was adopted by the Maternity and Child Welfare Committee as from 1st July, 1921:—

No. in family	Maximum income
1.....	16/- after deduction of rent.
2.....	13/- per head „ „
3.....	10/6 „ „ „
4.....	9/6 „ „ „
5.....	8/6 „ „ „
6.....	8/- „ „ „

In September, 1921, following on a decision of the Ministry of Health to cut down the Exchequer grant to local authorities towards the cost of free milk distribution from 50% of approved expenditure to a sum not exceeding 5% of the expenditure for the corresponding period in the *previous* financial year (circular 234), the Committee came to the conclusion that the scheme for the provision of free milk had become unworkable, and the supply of free milk was accordingly stopped on the 17th of that month.

The above decision of the Ministry was, however, revoked later in the year (circular 267, 13th Dec., 1921), and the Committee's scheme for distribution was again put into operation.

The need for the very strictest economy in connection with the expenditure involved has been fully realised. Applications for free milk are allowed to go forward only where the doctors at the clinics have satisfied themselves, by a medical examination of the cases on whose behalf the applications have been made, that the supply is essential on grounds of health.

Milk is given only to—

- (a) Nursing mothers who are actually suckling their children;
- (b) Expectant mothers in the last three months of pregnancy;
- (c) Children up to twelve months whose mother is unable to nurse them.

ANTE-NATAL CLINIC.

At the ante-natal clinic 49 sessions were held during the year, and 174 new cases were seen.

Condition with regard to pregnancy.—The condition of these cases with regard to pregnancy at the time of their first attendance was as follows:—

- (a) 22 were in their first pregnancy
- (b) 105 were in their second or subsequent pregnancy
- (c) 47 were not pregnant

174

Attendances.—The attendances made by these three classes of case were:—

- (a) 50
- (b) 347
- (c) 87

484

Abnormalities.—The abnormalities or diseases found to be present were as follows:—

(a) Women who came to the clinic in their first pregnancy

Abnormality	No. of cases
Varicose veins	3
Slight pelvic contraction	2
Enlarged thyroid	1
Old tuberculous dactylitis	1
Cardiac disease	1
Body ringworm	1

(b) Women who came to the clinic in their second or subsequent pregnancy

Abnormality	No. of cases
Anæmia (marked) ..	5
Varicose veins	4
Chest (not T.B.)	3
Albuminuria (marked)	3
Cardiac disease	3
Venereal disease	3
Body ringworm ..	2
Difficult labour	2
Retroversion	2
Pulmonary tuberculosis	1
Scabies	1
Small round pelvis*	1
Antepartum hæmorrhage	1
Uterine prolapse	1
Inguinal hernia ..	1
Abscess (finger)	1

* Labour was induced here in 8th month.

(c) Women who were not pregnant when they first attended the clinic

Abnormality	No. of cases
Uterine displacements	9
Anæmia	7
Hæmorrhage	3
Venereal disease	3
Pleurisy	3
Breast abscess	2
Ovarian tumour	1
Vaginal cyst ..	1
Cancer	1
Goitre	1
Enlarged liver	1
Tapeworm	1
Pulmonary tuberculosis	1
Abscess in axilla	1
Inguinal hernia	1
Enlarged uterus	1
Cardiac disease	1

Progress of pregnancies.

- (a) Of the 22 who came in their first pregnancy
- 9 were confined before the end of the year and had healthy male children
 - 8 had female children (1 died at 8 months)
 - 4 had not yet been confined at the end of the year.
 - 1 has left district and cannot be traced
- (b) Of the 105 women who came in their second or subsequent pregnancy
- 1 had twins, male and female
 - 54 had boys born alive, of whom one only lived an hour and one was induced at 8th month on account of small round pelvis
 - 29 had girls born alive, one of whom died at 2 weeks, probably as the result of venereal disease in the parents
 - 2 cannot be traced
 - 2 died before the birth
 - (a) of (?) Bright's disease
 - (b) Had a fall with a subsequent operation at Borough Hospital, after which she died
 - 2 had stillborn children—one mother dying after the birth
 - 1 had an abortion
 - 1 had a macerated child
 - 12 had not reached full term at the end of the year.
- (c) Of the 47 non-pregnant women who attended
- 6 had operations at the Borough Hospital
 - 3 others were under treatment at the Borough Hospital at the end of the year
 - 1 had operation at the Shaw Street Hospital for Women, Liverpool
 - 1 had operation performed privately

Co-ordination with Borough Hospital.—Of the cases requiring operative treatment those which were considered suitable were referred to the Borough Hospital, whose staff have co-operated very readily with the work of the ante-natal clinic.

Maternity outfits.—8 outfits were lent out during the year; 5 were returned and 3 were in use at the end of the year.

OTHER PROVISION MADE BY THE LOCAL AUTHORITY.

Cases dealt with at Borough Hospital.—During the year, under the Corporation's agreement, 7 cases (women) were dealt with at the Borough Hospital.

Cases dealt with at Leasowe Hospital.—The three beds reserved by the Corporation at Leasowe Hospital were in occupation throughout the year.

Cases dealt with by the Birkenhead District Nursing Society.—During the year the society's nurses paid 1,141 visits to 62 cases, as per agreement between the society and the Corporation. In addition 1,283 visits were paid to 99 cases in children under 5 years of age not included in the agreement.

Cases of confinement attended by medical practitioners.—In 38 cases where doctors were called in to difficult cases of confinement the doctors' fees were paid by the Corporation under the provisions of the Midwives' Act, 1918.

AGENCIES ASSISTED BY THE LOCAL AUTHORITY.

The Corporation gives financial support to certain other institutions, etc., for general services rendered in connection with maternity and child welfare work.

Birkenhead Maternity Hospital.—Here 15 beds are provided for maternity cases, but no beds are specially set apart for patients sent from this department. Under the direction of the Hospital Committee a clinic for mothers and babies is held at Grange Mount, Birkenhead.

St. Paul's Eye Hospital, Liverpool.—Cases of ophthalmia neonatorum are treated at this hospital. During the year seven infants suffering from ophthalmia neonatorum were admitted to the hospital from this area.

Birkenhead Day Nursery.—Here accommodation is provided for 24 day children and 3 boarders.

Birkenhead and Wirral Invalid Children's Association.—Arrangements are made by this association to send children to convalescent homes, and to provide massage, treatment for cases of infantile paralysis, etc.

Birkenhead and District Rescue Association.—This association provides 34 beds at St. Faith's Home for unmarried mothers and their children—20 beds for babies and 14 for mothers.

The grants made by the Corporation to the above agencies for the current financial year were as follows:—

Birkenhead Maternity Hospital.....	£200
St. Paul's Eye Hospital	30
Birkenhead Day Nursery	75
Birkenhead and Wirral Invalid Children's Association	30
Birkenhead and District Rescue Association	50
	£385

AGENCIES NOT PROVIDED OR ASSISTED BY THE LOCAL AUTHORITY.

Other agencies whose work in Birkenhead touches the welfare of mothers and infants, but which are not provided or assisted by the Birkenhead Corporation, are the following:—

The Birkenhead Union.

The Birkenhead and Wirral Children's Hospital.

The Charity Organisation Society.

The Society for the Prevention of Cruelty to Children.

The Naval and Military War Pensions Committee.

The Sisters of Charity (St. Elizabeth's) Welfare Centre,
Claughton Road, Birkenhead.

The Gynæcological Clinic at the Borough Hospital (opened in
April, 1920, with Dr. Dalzell as honorary gynæcologist).

HEALTH OF SCHOOL CHILDREN.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Education Committee for promoting the health of the children attending elementary and secondary schools in the Borough include

(a) The medical inspection and re-inspection of children and young persons in elementary and secondary schools. Routine inspection in elementary schools now covers the examination of

“Entrants”—all admissions to infants’ schools and all children in such schools not previously examined.

“Intermediates”—children reaching the age of eight during the year.

“Leavers”—children in senior schools reaching the age of twelve during the year.

(b) The following up of cases found on inspection to require medical attention.

(c) The provision of medical treatment for certain children suffering from minor ailments.

(d) The examination of children with defective vision, the prescribing of spectacles, and the supply of spectacles.

(e) The provision of a special school for mentally defective children.

(f) The medical examination of children with reference to fitness for employment.

(g) The examination of children suspected of mental defect.

(h) The examination of children for whom exemption from school attendance is claimed.

(i) The examination of children awarded scholarships to secondary schools, bursars, and student teachers.

(k) The inspection of school premises as to lighting, ventilation, &c.

Staff.—Dr. Mary Deacon, Assistant Medical Officer, was engaged on the detailed work of inspection and treatment throughout the year. Dr. Smythe, who joined the staff in 1915, resigned early in 1921, terminating his duties on 28th February. An interval of two and a half months elapsed before Dr. William Macewen, who was appointed to fill the vacancy thus created, came to Birkenhead. As a result the amount of work done during the year was considerably less than in 1920.

Dr. Grimshaw continued throughout the year to examine and prescribe spectacles for cases of visual defect referred to him as a result of medical inspections. Early in the year the work of routine dental inspection and treatment was commenced by Mr. Wilson Smith, L.D.S.

The opening of the dental clinic necessitated the appointment of an additional nurse; bringing the nursing staff available for the school medical service up to the equivalent of six whole-time nurses.

Co-ordination with other health work.—The Board of Education request that a statement as to the co-ordination of the work of the School Medical Service with that of other health services in the area should appear in this annual report. In Birkenhead, as in the great majority of other areas throughout the country, full co-ordination exists in so far as one principal Medical Officer is responsible for the organisation and administration of the health and medical services provided by the Education, Health, and Maternity and Child Welfare Committees.

It is recognised by these committees to be very desirable in the interests of economy and general efficiency that this linking-up should be as intimate as possible. Records of children who have been under supervision at Maternity and Child Welfare Clinics should be available in connection with school medical inspection in later life; detailed reports on mentally defective children should later be readily accessible for the purposes of the Mental Deficiency Committee's work; the control of infectious disease in schools should be in the same hands that deal with the medical inspection of school children; and in many other directions the need for unification is equally obvious.

Extensions in administrative arrangements contemplated or suggested.

1. *Cleansing station.*—Consideration has been given by the Education Committee to the provision of a cleansing station for verminous children, and it is hoped that it will be possible to make this provision during the coming year.

2. *X-ray treatment of ringworm.*—Arrangements have now been made with the Birkenhead and Wirral Children's Hospital for the use, by the Education Committee's medical staff, of the X-ray apparatus in that institution for the treatment of cases of ringworm among school children, and this work will be commenced during 1922.

3. *Open-air school.*—In my last annual report emphasis was laid on the importance of open-air school provision in the economy campaign against disease. Local authorities fully realise that they cannot afford to be extravagant with the health of the community; that this may be increasingly safeguarded by organised measures, or squandered by communal neglect. Open-air schools are a valuable asset towards health-saving, and the need for their provision is not likely to be lost sight of.

MEDICAL INSPECTION AND TREATMENT (ELEMENTARY SCHOOLS).

(A) INSPECTION.

Number of elementary schools and school children.—The number of elementary schools in the borough is:

Council Schools	15
Voluntary Schools	19 Total 34

The recognised accommodation of these schools on the 31st December, 1921, was:

Council Schools	13,248
Voluntary Schools	13,085 Total 26,333

The average number of scholars on the rolls during the year was:

Council Schools	11,270
Voluntary Schools	13,373 Total 24,643

The average attendance was:

Council Schools	9,837
Voluntary Schools	11,372 Total 21,209

Children inspected.—The following elementary school children were medically inspected during the year:—

1. At Routine Inspections	6061
2. At Special Inspections in the ordinary schools	269
3. As prospective entrants to the Higher Elementary School, the Institute for Boys, the Girls' Secondary School, St. Francis Xavier's College and the Catholic Institute ...	201
4. As entrants to the Cloughton Road Special School for Mental Defectives	37
5. As candidates for Student-Teacherships	7
6. Under the Employment of Children Bye-laws	212
Total	6,787

The numbers examined in each school are given in Table S 12.

Re-examination of defective children.—During the year 1,872 children who at a previous examination had been found to require medical care were re-examined by the Assistant Medical Officers.

Co-operation of parents.—Notice is sent to parents before routine inspections informing them of the time when the examination will take place. The nature of any defects found is carefully explained at the inspection, and the reasons for obtaining medical attention made as clear as possible, so as to enlist the sympathy of the parents and secure their co-operation.

Parents attended at the examination of 3,560 (58.7 per cent.) of the 6,061 children dealt with at routine inspections; and 190 (94.5 per cent.) of the 201 prospective entrants to secondary schools.

Vaccination.—In the ordinary inspections children were examined as to vaccination marks. Of the 6,061 children examined

1110 (18.3%) showed no marks.
1949 (32.2%) showed one mark.
733 (12.1%) showed two marks.
384 (6.3%) showed three marks.
1885 (31.1%) showed four or more marks.

Height and weight.—Particulars of the average height and weight of the children examined are set out in Table S 9.

Infectious diseases.—Enquiry was made at each inspection as to the infectious diseases from which the children had suffered in the past. The information elicited is summarised in Table S 10.

Defects found requiring treatment.—The number of children referred for treatment as the result of medical inspection was as follows:—

	Code Group.	Special Cases.
<i>Skin Conditions.</i>		
Pediculosis	571	18
Ringworm	14	4
Scabies	37	8
Impetigo	41	17
Other diseases	11	4
<i>Eye Defects.</i>		
Defective vision and squint (for further details see Table S 2)	675	87
External eye disease	54	9
<i>Ear Defects</i>		
Defective hearing	70	21
Ear disease	77	7
<i>Teeth Defects</i> (for further details see Table S 8)	1718	40
<i>Nose and Throat Defects.</i>		
Enlarged tonsils	125	4
Enlarged tonsils and adenoids	239	19
Adenoids	94	11
<i>Non-Pulmonary Tuberculosis.</i>		
Glands	1	1
<i>Other Defects or Diseases</i>	234	36

A full statement regarding the defects found setting out the number of defective children is given in Table S 6. In Table S 12 the defective children are classified according to the schools attended.

(B) TREATMENT.

The following procedure is observed as a routine in connection with all cases found on medical inspection to require treatment or supervision, in addition to informing the parents of the nature of defects found and the need for securing treatment:—

1. All cases where defects have been found are “followed up,” visits to the homes being paid by the Health Nurses, and the parents urged to secure treatment.

2. Re-examinations of cases of defect are made by the Assistant Medical Officers from time to time, both in the schools and at the clinics.

During the past year the Health Nurses paid 2,893 visits to the homes of defective children in connection with “following up”—1,663 first visits and 1,230 re-visits; and 1,872 defective children were re-examined by the Assistant Medical Officers.

It should be noted that in every case where medical defects requiring treatment are found the parents are urged in the first instance to *consult the family doctor*. Every effort is made, and should be made, to secure that the organised scheme of medical inspection provided by the education authority does not in any way take the place of, or interfere with, the established relationship between the family and their private medical attendant.

Treatment of children found, at medical inspections held during 1921, to be suffering from defects which required medical attention.—

As has been stated above, 2,489 out of the 6,330 children examined at routine or special inspections in elementary schools during 1921 were found to be suffering from defects requiring medical attention; of this 2,489, 585 or 23.5 per cent. received treatment before the end of the year.

Details of the various types of ailment treated will be found in Table S 4.

Treatment carried out at General School Clinic.—At this Clinic treatment is given for such defects as otorrhœa, external eye disease, impetigo, scabies, ringworm, etc.

The scheme for the treatment of cases of malnutrition, etc., was continued, as described in the annual report for 1920.

Details of the work done at this clinic will be found in Tables S 4, S 5, and S 11.

Treatment carried out at Eye Clinic.—Throughout the year children who were found by the Assistant Medical Officers in the course of medical inspections to require spectacles, and whose parents were not in a position to provide the necessary attention privately, were seen by Dr. Grimshaw at the Eye Clinic. Suitable glasses were prescribed, and these were fitted at a later session. So far as could be arranged, re-inspection after a few months to check the results of treatment was carried out. (The detailed arrangements for the Eye Clinic were set out in the annual report for 1920.)

During the year 587 cases were examined and 526 children were provided with spectacles. These spectacles were supplied by the Education Committee at a cost of £173 17s. 4d., of which £116 6s. 1d. has been recovered from the parents.

In addition, 205 attendances were made by children for re-examination; and in 92 cases prescriptions were given for new or altered glasses.

The following is a summary of the condition of the eyes for which spectacles were prescribed during the year:—

Total number of cases of Hypermetropia (Simple and Astigmatic)	567
Total number of cases of Myopia (Simple and Astigmatic)	185
Total number of cases of Mixed Astigmatism	49
Total number of cases of Isometropia (equal defect)	516
Total number of cases of Anisometropia (unequal defect)	155

Hypermetropia.

Both eyes	190
Right eye	45
Left eye	38

Simple Hypermetropic Astigmatism.

Both eyes	46
Right eye	15
Left eye	18

Compound Hypermetropic Astigmatism.

Both eyes	138
Right eye	34
Left eye	43

<i>Myopia.</i>	
Both eyes	57
Right eye	5
Left eye	12
<i>Simple Myopic Astigmatism.</i>	
Both eyes	24
Right eye	11
Left eye	14
<i>Compound Myopic Astigmatism.</i>	
Both eyes	41
Right eye	17
Left eye	4
<i>Mixed Astigmatism.</i>	
Both eyes	29
Right eye	14
Left eye	15

The following conditions were also recorded among the children who attended the clinic:—

<i>Obstructive Blindness.</i>	
Corneal ulcers	2
Leucoma	4
Nebulæ	16
<i>Nerve Blindness.</i>	
Disseminated choroiditis	1
Retino-choroiditis	2
Macular disease	4
Congenital defects:	
Coloboma of iris and choroid	1

Treatment of uncleanness.—Under the new arrangements made by the Committee during the year the part-time services of each of the Health Nurses, under the supervision of the Chief Health Nurse, are now available in connection with the investigation of the personal cleanliness of school children.

The average number of visits paid during 1921 by the nurses to each school was 23.

The total number of examinations made of children by the nurses in the schools was 24,059.

The number of individual children found unclean was 4,966.

The attention of the parents was directed to the condition of these children, and a considerable improvement was, in the aggregate, obtained.

421 home visits were paid; 237 first visits and 184 re-visits.

DENTAL INSPECTION AND TREATMENT (ELEMENTARY SCHOOLS).

Scheme for dental inspection and treatment.—In January, 1921, I submitted to the Education Committee a scheme for school dental inspection and treatment in Birkenhead. This scheme, the main features of which are set out below, was approved and subsequently put into operation.

(a) Scope of the work.

1. In the first instance the work of dental inspection and treatment of school children will be limited to children between the ages of 6 and 8 years, the object being to secure the earliest possible attention to the secondary or permanent teeth, which generally erupt at about 6 years of age.

The desirability of extending the work as soon as possible so as to include children of 5 years of age will, however, be kept in view.

2. The number of children on the rolls in the 6 to 8 years age group in July, 1920, in the schools throughout the Borough was as follows:—

Age 6 to 7—Boys	1347	
Age 6 to 7—Girls	1403	
Age 7 to 8—Boys	1450	
Age 7 to 8—Girls	1364	
Total 6 to 8—Boys	2797	—
Total 6 to 8—Girls	2767	5564

It cannot be expected that one Dental Surgeon will be able to overtake the inspection and treatment of all these children in one year. The results of the first year's work, however, will provide the Committee with information which will be of the greatest value to them in the further development of the scheme.

(In a complete scheme there would be examined each year not only all the new children in the six-and-seven-years-old groups, but also the children examined in these groups in previous years. The adoption of such a scheme would mean that in six years from the commencement every child in the elementary schools would be examined annually.)

(b) Routine arrangements.

3. When the School Dental Surgeon proposes to visit a particular school, an intimation will be sent to the head teacher stating that a visit will be paid in the course of a few weeks and asking for a return from the head teacher on an enclosed form showing the names and addresses of all children attending the school who are between the ages of 6 and 8.

4. When the return has been received by the Dental Surgeon a further communication will be sent to the head teacher fixing a date for the visit of inspection.

5. A formal intimation will not be sent to the parents of each of the children inviting them to attend at the inspection. The head teacher, however, may at his discretion send an informal message through the children. It will be found especially advantageous to follow this course at the outset of the work in order to secure the sympathy of the parents with the work and remove any misunderstandings.

6. At the appointed time the School Dental Surgeon will attend at the school and will carry out the inspection with the assistance of a nurse. As the inspection proceeds the Dental Surgeon will fill in a dental chart for each child. (On this chart there is space for a record to be made each year of the child's school life.)

7. When the inspection has been completed the dental charts will be taken back to the dental clinic by the nurse.

8. The dental charts after being returned to the clinic will be classified into—

- (a) Cases requiring treatment.
- (b) Cases not requiring treatment.

Cards will be made out for all cases requiring treatment, intimating to the parents of the children concerned the need for treatment being obtained, urging them to obtain this privately, but offering in necessitous cases to provide the required treatment at the clinic.

When the cards for a given school have been made out they will be sent to the head teacher with a covering letter requesting the head teacher to give them to the children concerned to take home to their parents.

9. The replies will be received by the head teachers from the parents stating whether they are arranging for private treatment or wish to apply for treatment at the clinic. When all the replies have been received they will be sent by the head teacher to the dental clinic.

10. A list of children who require treatment and whose parents have requested that this should be provided at the dental clinic will thus be available at the clinic. From this list a programme for treatment will be drawn up, the cases being spaced out over a suitable number of sessions. A card will be made out for each case inviting the parent to attend at the clinic with the child on a given morning or afternoon. All the notices will then be sent to the head teacher for distribution.

11. The head teacher will distribute the notices to the children concerned. (The head teachers thus will be kept informed as to the days and times when children will be justifiably absent from school for the purpose of obtaining dental treatment.)

12.—Children will attend at the appointed times at the dental clinic for treatment (which in most cases will be completed at one session; but in special instances may extend over two or more sessions).

(c) Further notes.

13. Certain types of cases will necessitate special arrangements; for example, cases involving the administration of general anæsthetics. Anæsthetics will be administered by the Committee's medical staff.

In every case where the administration of a general anæsthetic is called for, the consent of the parent to such administration will be obtained in writing beforehand.

14. Upon the occasion of the visit of the Dental Surgeon to a school he will take the opportunity of speaking to the older children (12 and over) on the subject of cleanliness of the mouth, the advantages and disadvantages of different foodstuffs, etc.

15. The services of the Health Nurses will later be judiciously utilised in connection with the following up of cases where parents neglect to obtain treatment for dental defects.

16. It does not appear to be desirable to charge fees for treatment done at the clinic. It is found in actual practice that the total amount received in this way hardly pays the cost of collection; and the charging of small fees has the undesirable effect of lowering the value of the treatment in the eyes of the parents. Every endeavour should be made to secure that parents who can afford to obtain the services of a private dental surgeon should do so.

17. The desirability of linking up this branch of the school medical service with the other work carried out in the area in connection with health should be recognised from the outset and the door left open so as to facilitate and encourage co-operation with the activities of other committees.

In his annual report for 1919 on the school medical service of the country, Sir George Newman, K.C.B., Principal Medical Officer to the Ministry of Health, indicates one field for such co-operation; he says "Much of the disease that each school dentist has to deal with has its beginning in infancy and in the health of the mother before and after the birth of the child. Dentists are being appointed in increasing numbers to maternity and child welfare centres, and other means should be adopted for linking these two branches of dental work."

Clinic premises and equipment.—The Education Committee's premises at 58 Mount Grove were selected for use as a dental clinic. Structural alterations and decorations were carried out at a cost of £373 13s. 0d.; and the necessary furniture, apparatus, and instruments purchased at a cost of £394 10s. 5d.

Preliminary visit to the schools.—Before the actual work of routine dental inspection was entered upon, the School Dental Surgeon visited every elementary school in the Borough where children of six or seven years of age were being taught, and explained to the head teacher the above scheme in detail. The general objects of the scheme were also discussed with a view to enlisting the head teachers' interest and co-operation.

Routine Inspection.

Number inspected.—2,695 children were inspected during the year—made up of 1,321 aged six years, and 1,374 aged seven years. The number of sessions devoted to inspection in the schools was 57.

Number requiring dental treatment.—Of the 2,695 children inspected 1,751, or 64.9 per cent., were selected as requiring treatment.

Cleanliness of teeth.—The children examined were classified according to cleanliness of teeth as follows:—

Clean	1085	(40.2%)
Fairly clean	883	(32.7%)
Dirty	727	(27.1%)

Condition of gums.—The following figures showing the condition of the gums of the children examined are of great interest:—

Gums healthy	1962	(72.8%)
Gums inflamed	541	(20.4%)
Gums septic	192	(6.8%)

Condition of bite.—This was found to be as set out below:—

Bite good	1456	(50.3%)
Bite fair	717	(26.6%)
Bite bad	522	(23.1%)

The results recorded in each school inspected will be found in Table S 15.

Treatment.—Notices were sent out to the parents of the 1,751 children found to require dental treatment, with the following results:—

Refused to have treatment done	247	(14.1%)
Stated that treatment would be obtained privately	514	(29.2%)
Requested treatment at the Dental Clinic	989	(51.3%)
Left Borough shortly after date of inspection	1	

1751

The detailed statistics for the various schools where inspections were carried out are given in Table S 16.

Treatment at the Dental Clinic.—Of the 989 children for whom treatment at the Dental Clinic was asked, 785, or 44.8 per cent. of the children found on inspection to require attention were actually treated before the end of the year; 114 were sent for but did not attend; and 90 were on the waiting list on 31st December.

Details of treatment carried out.—The detailed work carried out at the clinic was as follows:—

Permanent teeth extracted	10
Permanent teeth filled	375
Temporary teeth extracted	1237
Temporary teeth filled	260
Scalings	607
Dressings	79
Local anæsthetics administered	628
General anæsthetics administered	33

The total attendances at the clinic numbered 918.

General considerations.—The results obtained in the first year of working must, I think, appear satisfactory; and to the enthusiasm and patience of Mr. Wilson Smith, L.D.S., the School Dental Surgeon, is largely due the success with which the inauguration of the Committee's scheme has been attended. The later development and advance of school dental work depends to a very great extent on the tact and sympathy with which it is handled in its beginnings. The hearty co-operation of the teachers has to be gained, the interest of parents has to be aroused, and their incredulity and not unnatural opposition to totally new ideas must be removed gradually. No wholesale and immediate conversion to a proper appreciation of the principles of dental hygiene is possible; enlightenment and progress must come slowly.

The high proportion of requests for treatment at the clinic—over 50 per cent.—must be gratifying to Mr. Smith personally. In approximately 30 per cent. of cases parents promised to obtain treatment privately; but it is probable that at this early stage of the scheme's history this promise was often really an evasion. These cases, however, are not followed up at present with the object of bringing pressure to bear on the parents in the event of neglect; educational rather than compulsory methods must be relied on to give the best results.

Mr. Smith has recorded interesting impressions on the course of the year's work. With reference to the popular lack of knowledge in dental matters he says: "Of many mistakes made by parents in regard to their children's teeth and mouths, the most prominent is the assumption that the first permanent molar is a temporary tooth, and that consequently no attention need be paid to it, as it will be shed and replaced by a new one. I have very many amusing epistles from parents assuring me that their child has no second teeth, &c., when on referring to the chart I find they may have four, five or more. Parents, therefore, require to have this error pointed out to them, which I have done verbally and in many cases per letter. On what they base their assumption I have not yet been able to elucidate, but probably the fact that the teeth erupt so early may have something to do with it. On these four permanent molars is placed the strain of holding the fort, as it were, while the other (temporary) teeth are being gradually shed. If they decay, as they are very prone to do, owing, among other things, to the physiological changes going on in the mouth, the results are disastrous unless they are attended to within a reasonable time."

With regard to treatment, Mr. Smith observes: "Temperamentally and physically there is so much difference in children that to ignore this factor and prescribe any method of practice for all cases would result in failure and disaster. You cannot deal with human beings as you would with inanimate objects. The dentist's duty is to study the temperament of the child most carefully. One feature of the management of children during treatment is the unfortunate habit of deceiving them as to what is actually to be done. It is always well, of course, to destroy in the mind of the little patient any sense of fear by making as light as possible of the operation in hand, but deliberately to assure a child that a certain operation will not hurt when it is almost certain to do so is wrong. One must not forget, either, that naturally a child's jaws are small and comparatively weak, and the strain on the muscles in keeping the mouth open for a long period is considerable; hence an operation on a child might take twice, three times, or even four times as long as a corresponding operation on an adult."

MEDICAL INSPECTION AND TREATMENT (SECONDARY SCHOOLS).

Secondary schools and school children.—These schools, with the average number of children on the rolls, are as follows:—

The Birkenhead Institute (Boys)	487
The Girls' Secondary School	437

(At the Higher Elementary School there are on the rolls approximately 182 boys over the age of 14 whose medical inspection is called for on the same lines as that of the older children in secondary schools. These numbers are included in the total of 24,643 elementary school children given above.)

Birkenhead Institute.—The medical inspection of boys attending the Birkenhead Institute was begun during the year.

314 boys were examined; the defects found being as follows:—

	Boys.	Percentage.
Defective teeth	202	64.3
Nose and throat defects (including slight obstruction)	143	45.5
Defective vision (anything below 6/6)	99	31.5
Deformities and other abnormalities (spinal curvature, pigeon chest, undescended testicles, &c.)	72	22.9
Heart and circulation defects	43	13.7
Ear defects	19	6.1
Pediculosis	5	1.6
Other defects	43	13.7

Girls' Secondary School.—During the year four examinations were carried out by Dr. Deacon at this school. The first two, held in January and May, were for re-inspection purposes. A complete examination of every child in the school was made in September, and a complete re-examination was made at the end of the year. At the September examination 80 newly-admitted scholars were inspected.

A comparison of the results of the latter two inspections is shown in the Table S 14, the Junior and Senior Schools being separated. (The Junior School consists mainly of new children; the Senior of those children who have been in the school for one year and over.) The table contains interesting information as to prevalence of various defects among junior and senior scholars.

The remedial exercises carried out at this school are of the greatest benefit to the girls. Exercises are prescribed by Dr. Deacon to suit the defects found in individual girls—round shoulders, spinal curvature, etc.—and excellent results are obtained. But in order to secure the permanent correction of defects it is necessary to keep the child under treatment throughout the growing period.

A full report on the inaugural work of medical supervision carried out in 1920 at this school was published in the annual report for last year. There can be no question as to the benefits which have resulted.

The standard of cleanliness has been greatly raised, as is shown by a comparison of this year's percentage of children affected by pediculosis (4 per cent.) as compared with last year (14 per cent.).

There are 94 girls in the school wearing glasses for the correction of eyesight defects; a percentage of 22.6.

MISCELLANEOUS.

Examination of entrants to the Girls' Secondary School, the Birkenhead Institute, Higher Elementary School, St. Francis Xavier's College, and the Catholic Institute.—During the year 201 elementary school children were examined with a view to their admission to the above schools. 161 were found to require treatment for 241 defects, the latter being as follows:—

Defective teeth	139
Eye defects	27
Nose and throat defects	27
Skin conditions	2
Ear defects	11
Other defects	35
	241

The Special School for Mentally Defective Children.—The accommodation at the Special School for the year 1921 was 130. The average number on the rolls during the year was 109, and the average daily attendance 90.8.

Eight visits were paid to the school during the year by the Assistant Medical Officer. At these visits examinations were held of children suspected to be mentally deficient, with reference to their suitability for admission to the Special School. The results were as follows:—

Total number examined—Boys	21	
Girls	16	
		37
Number certified for admission—Boys	13	
Girls	14	
		27
Number not certified for admission—		
(a) Regarded as fit for ordinary school—Boys...	8	
Girls..	1	
		9
(b) Notified to the Local Authority under the		
Mental Deficiency Act—Boys	—	
Girls	1	
		1

As it is not possible to admit all the children nominated for the Special School, a careful selection is made from those presenting themselves for examination. Those children who are found capable of profiting from the ordinary instruction of their own school are not admitted, and on the other hand it would be useless to admit ineducable children.

9 children were permitted to leave the school after medical examination, as follows:—

Fit for work	7
Physically unfit to continue in attendance	2
Total	9

Of the 7 cases who left to take up work—

- 1 is employed in a shipyard;
- 2 are employed as errand boys
- 1 is usefully employed at home;
- 2 are employed as domestic servants;
- 1 is employed on a fishing boat.

The average age of the children attending the school, and their classification, are shown below:—

CLASS.	BOYS AVERAGE AGE.	GIRLS AVERAGE AGE.
Class 1—Boys.....	13	—
Class 2—Boys and Girls	12	13
Class 3—Boys and Girls	11½	12
Class 4—Boys and Girls	10	10
Class 5—Boys and Girls	9	10
Class 6—Boys and Girls	8	9

School dinners have been provided throughout the year at a cost to the parent of 3d. per day.

Daily average supplied 72

Total cost for the year £181

The weekly menu was:—

MondayLentil or pea soup; boiled bread pudding.

TuesdayStew—meat, onions, potatoes; rice pudding.

Wednesday...Minced meat, potatoes, greens; boiled fruit pudding.

ThursdayIrish stew; sago pudding.

Friday.....Hot pot.

After-care of children who have left the Special School.—Mentally defective children pass automatically out of the care of the Education Committee when they reach the age of sixteen.

It is just at this age, however, that supervision or guidance is urgently required for these cases; too often when the restraint of school discipline is removed the inherent lack of mental and moral self-control manifests itself, and the result of many years of devoted work spent on the children by the teachers in the Special School is undone.

As was stated in the annual report for 1920, a card index register of all the children who have left the school since it was opened in September, 1903, is now kept in my office.

An enquiry was carried out during the past year into the circumstances of these cases, and much valuable information was obtained. Of this the following is a summary:—

(a) Lost trace of, died, or left Borough—

Lost trace of 150

Died 23

Left Borough 32 — 205

(b) Returned from Special School to ordinary schools 4

(c) Entered employment after leaving school; nature of employment—

Army 8

Shipyards 17

Railways 3

Lairages 1

Gasworks 1

Street sewer work 1

Motor work 1

Hairdressing 1

Bottling stores 2

Printing works 1

Saddlery work	1	
Soap works	2	
Laundry work	3	
Gardening and farm work	3	
Typewriting	1	
Upholstering	1	
Window cleaning	2	
Dock labouring	2	
Running errands	5	
Selling newspapers	4	
Dressmaking	1	
Domestic service	6	
Casual work	11	— 78
(d) Engaged in housework—		
(a) With parents or guardians	13	
(b) In own home (females, married)	7	— 20
(e) Leading a vagrant life		1
(f) At home and unable to work		10
(g) Placed by Mental Deficiency Committee under home supervision		15
(h) Placed in institutions—		
Reformatories	4	
Homes (Guardians' cases)	5	
Residential homes	18	
(11 sent by Mental Deficiency Committee)		
Asylum	1	
Industrial schools	2	— 30
		<u>363</u>

Physical training: School baths.—No organiser of physical training in school has as yet been appointed in Birkenhead and no schools have been furnished with school baths. (Information on these points is asked for by the Board of Education.)

Provision of meals.—Since the supply of meals was re-commenced on 7th February, 1921, 2,867 children have been supplied with 190,396 meals at an average cost per head of £1 4s. 6d. per meal of 2.12d., and at a total approximate cost of £3,300. Meals were provided five days per week, with the exception of Bank and Public Holidays.

Birkenhead and Wirral Invalid Children's Association.—During the year cases of deformity, paralysis, etc., were from time to time referred to this Association, and invariably the fullest assistance was given—massage and other suitable treatment being provided.

The following table shows the number of massage cases among children of school age dealt with by the Association during the year:—

	Sent from School Clinics	Other cases	Total
Children under treatment at the end of 1920	9	12	21
New children seen during the year	51	28	79
Children discharged during the year	9	5	14
Children who ceased attending before completion of treatment	13	6	19
Children under treatment at end of 1921	22	25	47

Of the 79 new children seen during the year, 59 were taken on for treatment, and 20 were on the waiting list at the end of the year.

The 60 cases referred from the school clinic to the Association were as follows:—

Disease	No. of cases.
Scoliosis	6
Kyphosis	1
Spinal curvature and round shoulders	4
Spinal curvature and bronchitis (chronic)	6
Round shoulders and deficient chest expansion	3
Chest deformity	7
Debility and muscular weakness	3
Infantile Paralysis	2
Bronchitis (chronic)	2
Rickets and pigeon chest	14
Depressed sternum	5
Cyanosis	1
Hip disease—shortening of leg	1
Rheumatic knee	1
Deformity right foot after rheumatic fever	1
Slight talipes left foot	1
Stiff elbow joint from old fracture	1
Loss of power right arm	1
	60

Of the 13 who stopped going of their own accord at least 6 had already had a long course of treatment and were very much improved.

The very large total attendances made by this class of case shows great perseverance on the part of the parent and of the masseuse. Many of these parents have difficulty in finding the time required to take the children to the clinic twice and often three times a week. Children sent from the school clinics are usually medically re-inspected once a month; at these inspections the mothers have expressed very great satisfaction at the treatment provided and pleasure at the progress made by the children. A small charge is made by the Association for the massage given.

TABLE S 1.

Number of Public Elementary School Children Inspected 1st January, 1921, to 31st December, 1921.

A.—ROUTINE MEDICAL INSPECTION.*

Age	ENTRANTS					
	3	4	5	6	Other Ages	Total
Boys	1	96	928	250	59	1334
Girls	1	110	860	258	66	1295
Totals	2	206	1788	508	125	2629

Age	INTERME- DIATE GROUP	LEAVERS			Other Ages	Total	Grand Total
	8	12	13	14			
Boys	391	1336	90	4	—	1430	3155
Girls	390	1127	92	2	—	1221	2906
Totals	781	2463	182	6	—	2651	6061

B.—SPECIAL INSPECTIONS.

	Special Cases †	Re-Examinations (i.e., No. of Children re-examined)
Boys	1697	577
Girls	1620	680
Totals	3317	1257

C.—TOTAL NUMBER OF INDIVIDUAL CHILDREN INSPECTED WHETHER AS ROUTINE OR SPECIAL CASES (no Child being counted more than once in the year).

No. of Individual Children Inspected 9378

*Routine Medical Inspection is medical inspection carried out on the lines of the approved Schedule at the time when routine medical inspection is due and made on the school premises or other place sanctioned by the Board of Education under the Code.

†“Special Cases” are those children specifically referred for medical examination and not due for routine medical inspection under the Code at the time when specially referred. Such children may or may not be of Code-group age and may be referred to the Assistant Medical Officers at the school or the clinic by the Medical Officer, Health Nurses, Teachers, Attendance Officers, Parents or otherwise.

TABLE S 2.

Return of Defects found in the course of Medical Inspection and referred for treatment in 1921.

This table is, except as regards the final line, a record of defects and not of individual children who are defective. For the sake of convenience cases of Squint are recorded also under the heading of "Defective Vision," and cases of defect of Nose and Throat are included in one only of the sub-headings.

Defects or Disease	ROUTINE INSPECTIONS	* SPECIALS
	No. referred for treatment	No. referred for treatment
Malnutrition	5	21
Uncleanliness .. Head	571	405
Body		
Skin..... Ringworm—Head	14	287
Body		
Scabies	37	225
Impetigo.....	41	443
Other diseases (non-tubercular)	11	72
Eye Blepharitis	—	70
Conjunctivitis	53	102
Keratitis	—	—
Corneal ulcer	—	22
Corneal opacities	—	—
Defective vision.....	529	167
Squint.....	146	30
Other conditions	1	67
Ear Defective hearing	70	35
Otitis media	—	1
Other ear diseases	77	177
Nose and throat. Enlarged tonsils	125	41
Adenoids.....	94	29
Enlarged tonsils and adenoids.....	239	22
Other conditions	4	48
Enlarged cervical glands (non-tubercular).....	1	21
Defective speech	11	2
Teeth Dental diseases	1718	114
Heart and circulation—		
Heart disease—Organic	24	11
Functional	1	26
Anæmia	35	106
Lungs Bronchitis	—	52
Other non-tubercular diseases.....	38	68
Tuberculosis ... Pulmonary—Definite	—	—
Suspected.....	—	—
Non-pulmonary—Glands	3	6
Spine		
Hip		
Other bones and joints		
Skin		
Other forms.....		
Nervous system.. Epilepsy	—	3
Chorea.....	1	8
Other conditions	—	21
Deformities Rickets	2	12
Spinal Curvature	8	14
Other forms	5	23
Other defects and diseases	97	651

Number of individual children having defects which required treatment. 6126

NOTE.—No cases were classified as "Requiring to be kept under observation, but not referred for treatment."

*See footnote † in Table I.

TABLE S 3.

Numerical Return of all Exceptional Children in the Area in 1921.

		Boys	Girls	Total
<i>Blind</i> (including partially blind) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893	Attending public elementary schools...	-	-	-
	Attending certified schools for the blind	3	3	6
	Not at school.....	-	-	-
<i>Deaf and dumb</i> (including partially deaf) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893	Attending public elementary schools..	-	-	-
	Attending certified schools for the deaf	5	3	8
	Not at school.....	1	2	3
<i>Mentally deficient</i>	Attending public elementary schools...	-	-	-
	Attending certified schools for mentally defective children	74	39	113
	Notified to the Local Control Authority by Local Education Authority during the year	-	2	2
	Not at school.....	2	3	5
	Imbeciles	-	-	-
	Idiots	-	-	-
		-	-	-
<i>Epileptics</i>	Attending public elementary schools	-	1	1
	Attending certified school for epileptics	1	1	2
	In institutions other than certified schools	-	-	-
	Not at school	3	2	5
<i>Physically defective</i>	Attending public elementary schools..	45	40	85
	Attending certified schools for physically defective children	-	-	-
	In institutions other than certified schools.....	2	4	6
	Not at school.....	14	17	31
	Attending public elementary schools..	67	82	149
	Attending certified schools for physically defective children.....	-	-	-
	In institutions other than certified schools.....	11	7	18
	Not at school.....	7	10	17
	Attending public elementary schools...	-	1	1
	Attending certified schools for physically defective children...	-	-	-
	In institutions other than certified schools...	-	1	1
	Not at school.....	3	6	9
	Attending public elementary schools .	-	-	-
	Attending open-air schools	-	-	-
	Attending certified schools for physically defective children other than open-air schools.....	-	-	-
	Not at school	8	8	16
* + Dull or backward		Retarded 2 years	-	-
		Retarded 3 years	-	-

*Judged according to age and standard. No case retarded more than 3 years is included in this category unless it has been decided after medical examination that the child is not mentally defective.

†No detailed list has yet been prepared.

TABLE S 4 .

Treatment of Defects of Children during 1921.

A.—TREATMENT OF MINOR AILMENTS.

Disease or defect	Number of children			
	Referred for treatment	Treated		
		Under Local Education Authority's scheme	Otherwise	Total
<i>Skin</i> —Ringworm—head	214	166	12	178
body	87	81	—	81
Scabies	262	147	40	187
Impetigo	484	370	8	378
Minor injuries	84	51	5	56
Other skin diseases	83	53	11	64
<i>Ear disease</i>	360	145	13	158
<i>Eye disease</i> (external and other) ..	315	207	15	222
<i>Miscellaneous</i>	748	459	179	638

B.—TREATMENT OF VISUAL DEFECT.

Number of children									
Referred for refraction	Submitted to refraction				For whom glasses were prescribed	For whom glasses were provided	Recommended for treatment other than by glasses	Received other forms of treatment	For whom no treatment was considered necessary
	Under Local Education Authority's scheme—Clinic or hospital	By private practitioner or hospital	Otherwise	Total					
696	587	34	—	621	587	560	—	—	34
Re-exams.	118			118	118	92	—	—	—
—	705			739	705	652	—	—	34

C.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for treatment	Number of children			
	Received operative treatment			Received other forms of treatment
	Under Local Education Authority's scheme—Clinic or hospital	By private practitioner or hospital	Total	
600	—	105	105	13

D.—TREATMENT OF DENTAL DEFECTS.

1. Number of Children dealt with.

	Age groups										'Specials'	Total
	5	6	7	8	9	10	11	12	13	14		
(a) Inspected by dentist	—	1321	1374	—	—	—	—	—	—	—	—	2695
(b) Referred by dentist for treatment	—	733	1018	—	—	—	—	—	—	—	—	—
(c) Actually treated ...	—	335	450	—	—	—	—	—	—	—	—	—
(d)*Re-treated (result of periodical examination)	—	—	—	—	—	—	—	—	—	—	—	—

* It is understood that cases under this head are also included under (c) above.

NOTE.—This table records only treatment work carried out at the Dental Clinic and arising out of routine dental inspection.

2. Particulars of Time given and of Operations undertaken.

No. of half days devoted to inspection	No. of half days devoted to treatment	Total No. of attendances made by the children at the Clinic	No. of permanent teeth		No. of temporary teeth		Total No. of fillings	No. of administrations of general anaesthetics included in (4) and (6)	No. of other operations* (dressings)	
			Ex-tracted	Filled	Ex-tracted	Filled			Per-manent teeth	Tem-porary teeth
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
57	164	918	10	375	1237	260	635	33	57	22

*In addition 607 scalings were done.

E.—TREATMENT OF UNCLEANLINESS.

Average number of visits made during the year by the Health Nurses to each school	23
Total number of examinations made of children by Health Nurses in the year in the schools	24059
Number of individual children found unclean	4966
Number of children compulsorily cleansed	—
Legal proceedings taken under the Children Act, 1908, or the School Attendance Bye-laws	—

F.—TREATMENT OF ALL OTHER DEFECTS.

Number of cases referred for treatment	502
Number of cases treated up to 31st December, 1921	155

TABLE S 7.

Vision amongst Routine Cases (Elementary Schools) examined during 1921.

BOYS AND GIRLS.

	NORMAL					WORSE THAN
	6	6	6	6	6	6
Vision	—	—	—	—	—	—
	6	9	12	18	24	24
Right eye	2544	428	176	140	65	79
Left eye	2459	470	204	139	80	80

Number with both eyes defective	670
Children examined	3432
Percentage with defective sight	33.2

Note.—Entrants were not inspected in regard to vision.

TABLE S 8.

Number of Decayed Teeth amongst Elementary School Children at Routine *Medical* Inspections during the year 1921.

	No. examined	0	1 to 4	5 to 8	9 or more	Total No. of children with defective teeth	Percentage of children with defective teeth
Entrants—Boys	1334	537	590	177	30	797	59.7
„ Girls	1295	544	549	182	20	751	58.0
Intermediates—Boys.	391	92	207	83	9	299	76.5
„ Girls.	390	106	207	67	10	284	72.8
Leavers—Boys	1430	683	675	68	4	747	52.2
„ Girls	1221	601	563	53	4	620	50.8
Totals	6061	2563	2791	630	77	3498	57.7

TABLE S 9.

Heights and Weights of Elementary School Children.

	No. examined	Average height			Average weight		
		Ft.	In.	$\frac{1}{2}$ in.	Stones	Lbs	Ozs
Boys ... Age 4 years	96	3	3	6	2	8	14
Age 5 years	28	3	5	5	2	11	13
Age 7—8 years	391	3	9	5	3	6	12
Age 12 years	1336	4	5	15	4	13	13
Age 13 years	90	4	7	5	5	5	11
Girls ... Age 4 years	110	3	3	—	2	7	12
Age 5 years	860	3	5	1	2	10	8
Age 7—8 years	390	3	9	9	3	5	12
Age 12 years	1127	4	6	3	4	13	13
Age 13 years	92	4	9	4	5	11	15

TABLE S 10.

Past Infectious Diseases (Elementary School Children).

(1) Children aged 3—7 (2,606).		No. of Cases.	Percentage.
No Infectious Disease		682	26.2
Measles		1497	57.4
Whooping Cough		1089	41.8
Scarlet Fever		140	5.4
Diphtheria		55	2.1
Chicken Pox		653	25.1
Mumps		230	8.8
(2) Children aged 8—14 (3,455).		No. of Cases.	Percentage.
No Infectious Disease		224	6.5
Measles		3029	87.7
Whooping Cough		1794	51.9
Scarlet Fever		368	10.7
Diphtheria		103	3.0
Chicken Pox		1357	39.3
Mumps		859	24.9

Note.—The same child may have had more than one of these diseases.

TABLE S 11.
Cases treated at the Minor Ailments Clinic.

	Jan. 1 to March 31	April 1 to June 30	July 1 to Sept. 30	Oct. 1 to Dec. 31	Total
Total number of children who attended the clinic	476	698	553	1025	2752
Total number of children treated	474	687	553	1025	2739
Total number of attendances	2158	2972	2582	4417	12129
Total number cured	47	49	57	168	321
New cases	256	369	361	448	1434

TABLE S 12.

Number of children examined at Routine Medical Inspections in the Schools and number found defective in each School.

SCHOOL	Boys	Girls	Intermediates	Leavers	Total ordinary inspections	Parents present	Number of defective children	Number of defects found	Defective teeth	Tonsils and adenoids	Defective hearing and vision and ear	Defective sight	Conjunctivitis and blepharitis	Chest affections	Heart affections	Skin diseases, ringworm, impetigo	Hickets, anaemia, rickets, delicate	Other defects
Bidston Avenue	85	48	17	150	115	90	210	77	84	9	7	1	9	7	6	8	2	
Brassey Street	123	68	135	326	178	164	498	114	270	19	34	6	13	18	9	9	6	
Cathcart Street	104	109	103	316	178	182	430	136	184	14	36	5	11	16	14	8	6	
Hemingford Street	126	—	143	269	173	137	396	99	210	15	17	2	11	14	14	12	2	
Laird Street	118	103	99	320	195	155	439	132	223	13	20	3	10	14	10	11	3	
Mersey Park	102	—	90	192	108	46	63	21	18	2	6	—	5	3	3	—	5	
Rock Ferry	139	—	157	296	120	138	146	56	31	7	17	2	9	11	5	1	7	
Temple Road	77	—	59	136	87	35	53	16	12	—	3	—	1	5	8	1	7	
The Woodlands	74	—	118	192	79	70	88	29	12	1	16	1	11	9	2	4	3	
Well Lane	79	—	123	202	96	59	65	21	15	2	12	—	1	2	2	2	8	
Woodchurch Road	98	—	95	193	129	71	84	29	25	2	10	4	3	3	1	1	6	
Park Road Temporary	51	—	—	51	38	13	15	7	5	1	—	1	—	—	—	1	—	
Cleveland Street	64	58	—	122	71	79	195	56	74	8	29	2	6	7	3	8	2	
Price Street	—	—	53	53	9	25	69	3	35	6	14	—	2	5	3	1	—	
Cloughton H.G.	77	—	94	171	109	35	63	22	18	4	6	1	2	4	2	1	3	

Holy Trinity	57	—	57	135	66	158	34	68	7	26	2	3	2	4	10	2
Our Lady's	122	126	248	343	177	486	154	183	10	53	11	20	17	13	15	10
Oxton	28	—	28	62	22	22	5	6	—	6	—	1	3	1	—	—
Rock Ferry H.G.	77	65	142	220	130	61	72	11	5	11	3	3	5	2	4	4
St. Andrews, Conway St.	36	—	36	59	34	27	20	38	6	6	—	1	—	1	4	1
St. Anne's	86	89	175	238	138	145	103	200	29	40	3	8	15	2	7	6
St. Anne's R.C.	55	—	55	134	45	80	21	8	3	21	5	3	6	5	—	—
St. Catherine's	75	—	75	134	59	92	22	44	5	6	—	2	6	3	4	—
St. James'	35	39	74	125	75	86	177	63	76	4	11	3	6	1	5	3
St. John's	103	—	103	208	100	104	284	52	130	22	30	5	9	12	6	16
St. Joseph's	31	—	31	56	22	31	8	5	4	4	—	1	—	1	1	3
St. Laurence's	171	—	171	306	182	167	443	98	244	10	38	13	10	14	6	6
St. Luke's	76	76	152	246	127	95	120	44	21	10	17	2	4	7	5	4
St. Mary's	54	—	54	128	44	67	93	25	31	6	16	3	2	4	2	2
St. Paul's	62	—	62	102	49	45	46	14	6	1	18	—	2	1	2	1
St. Peter's	103	—	103	186	79	115	207	58	75	11	28	1	5	8	9	7
St. Werburgh's	104	—	104	208	90	118	328	67	135	34	28	13	12	13	4	15
Tranmere H.G.	37	—	37	76	45	14	42	14	13	2	3	1	4	1	2	1
Higher Elementary	—	—	—	106	97	66	165	55	62	13	8	—	6	13	3	5
Combined Totals	2929	781	3710	6061	3266	2875	1699	2572	285	597	93	196	246	159	176	115

* The number of defects found is in excess of the number of defective children, as one child may have several defects.

TABLE S 13.
Defects dealt with at the Minor Ailments Clinic month by month.

Month	NUMBER OF ATTENDANCES FOR TREATMENT										No. of attendances for treatment only	RESULTS	
	Ringworm	Verruinous condition	Dirty head	Impetigo	Scabies	Malnutrition tuberculous and delicate	Eyes	Ears	Other defects	Total No. of attendances		No. cured	No. of new cases
January.....	177	—	3	21	—	3	64	160	85	513	498	16	54
February.....	220	2	17	68	—	—	122	178	116	723	719	15	105
March	210	—	5	82	—	—	147	169	309	922	922	16	97
April	280	2	5	50	1	—	86	133	181	738	727	—	94
May	253	4	16	182	13	—	89	144	164	865	865	1	99
June	335	3	59	364	39	—	188	151	230	1369	1369	48	176
July	184	1	11	67	6	—	81	51	135	536	536	7	32
August	185	3	11	73	5	—	55	65	136	533	533	22	106
September.....	268	4	44	328	36	—	167	264	402	1513	1513	28	223
October	355	6	26	225	61	—	149	192	337	1351	1351	30	175
November.....	279	4	12	267	22	—	229	307	324	1644	1644	97	166
December.....	240	2	42	222	29	—	191	230	466	1422	1422	41	107
Totals.....	2986	31	251	1949	212	3	1568	2044	3085	12129	12099	321	1434

TABLE S 14.
Medical Inspections at Girls' Secondary School.

	JUNIOR SCHOOL.			SENIOR SCHOOL.		
	Examination in Sept., 1921.		Examination end of year.	Examination in Sept., 1921.		Examination end of year.
	Numbers.	Per cent.		Numbers.	Per cent.	
No. examined	115	—		317	—	—
Normal children	68	59.1	76.5	207	65.3	78.5
Defects	47	40.9	23.5	110	34.7	21.5
Carious teeth.....	30	26.1	13.1	55	17.3	11.4
Round shoulders, etc.	16	13.9	treatment	96	30.2	18.7
Spinal curvatures	—	—	—	9	2.8	2.6
Chest deformities	4	3.4	—	4	1.2	1.3
Eyesight defects	—	—	—	15	4.7	1.0
Enlarged tonsils	13	11.3	—	13	4.1	0.7
Pediculosis	2	1.7	—	4	1.2	—
Cardiac defects	—	—	—	4	1.2	—
Lung defects	—	—	—	4	1.2	—
Anaemia	—	—	—	4	1.2	—
Rupture	1	0.9	—	1	0.3	—
Enlarged thyroid	1	0.9	0.9	1	0.3	0.3
Suppurating gland	1	0.9	0.9	—	—	—
Acne	—	—	—	4	1.2	0.7
Scabies	—	—	—	1	0.3	—
Psoriasis	—	—	—	1	0.3	0.3
Rheumatism	—	—	—	—	—	—
Neuritis (arm)	—	—	—	1	0.3	1.0
Blepharitis	—	—	—	1	0.3	0.3
Alopecia (after X ray)	—	—	—	—	—	—
Operation for removing subsidiary thumb.	—	—	—	1	0.3	0.3
Other defects	3	2.6	1.5	12	—	—

* Receiving treatment

† Not yet treated.

TABLE S 15.

Routine Dental Inspection—Cleanliness, gums and bite.

School.	Age	TEETH			GUMS			BITE		
		Clean	Fairly clean	Dirty	Healthy	Inflamed	Septic	Good	Average	Bad
Woodchurch Road	6	33	31	23	62	22	3	36	31	20
	7	22	48	41	75	34	2	29	55	27
Cloughton Higher Grade ..	6	40	30	20	71	14	5	49	33	8
	7	46	57	34	105	21	11	54	62	21
Woodlands	6	79	42	23	128	15	1	91	47	6
	7	35	32	33	71	27	2	52	34	14
Temple Road	6	42	8	9	54	5	—	36	10	13
	7	27	24	17	59	9	—	40	24	4
Orton	6	14	17	10	33	8	—	19	17	5
	7	5	11	10	18	7	1	9	14	3
St. Joseph's	6	4	11	9	20	2	2	12	7	5
	7	3	17	6	19	6	1	13	5	8
Hemingford Street	6	64	23	19	80	21	5	70	15	21
	7	15	34	40	54	32	3	33	22	34
St. John's	6	41	17	31	56	26	10	53	16	23
	7	40	20	47	59	42	6	53	12	42

St. Werburgh's	6	44	25	17	64	16	6	55	15	16
	7	28	42	27	64	23	10	29	33	35
St. Andrew's Higher Grade ..	6	10	7	4	16	4	1	15	4	2
	7	10	9	9	21	3	4	17	5	6
St. Paul's	6	30	19	15	41	15	8	36	17	11
	7	25	19	15	47	9	3	42	8	9
St. Mary's	6	34	12	20	43	19	4	37	15	14
	7	25	8	29	46	12	4	31	12	19
Brassy Street	6	75	23	21	94	10	15	88	21	10
	7	53	31	20	74	17	13	65	21	18
Bedston Avenue	6	17	21	14	39	9	4	37	7	8
	7	22	16	21	41	9	9	42	5	12
St. James'	6	18	15	6	28	4	7	27	5	7
	7	7	7	9	10	8	5	11	6	6
Laird Street	6	39	38	9	66	16	4	39	35	12
	7	35	48	26	76	23	10	48	37	24
St. Catherine's	6	27	21	12	45	8	7	43	9	8
	7	16	28	21	43	10	12	35	17	13
Tranmere Higher Grade	6	9	7	6	17	3	2	12	5	5
	7	6	13	10	22	3	4	15	7	7
St. Luke's	6	25	20	18	46	14	3	42	10	11
	7	17	32	26	45	15	5	41	19	15
Totals		1085	883	727	1962	541	192	1456	717	522

TABLE S 16.

Treatment of defects found at Routine Dental Inspections.

School	Refused treatment	Promised to obtain private treatment	Requested clinic treatment	Actually treated at clinic	Sent for but did not come	Awaiting clinic treatment at end of year
Woodchurch Road...	11	50	86	82	4	—
Claughton H. G. ...	13	83	57	53	4	—
Woodlands	17	27	73	69	4	—
Temple Road... ..	5	25	33	30	3	—
Oxton	12	8	31	27	4	—
St. Joseph's	5	8	25	24	1	—
Hemingford Street...	9	35	93	80	13	—
St. John's	17	28	82	76	6	—
St. Werburgh's	32	15	86	64	*8	3
St. Andrew's H. G..	5	13	14	12	2	—
St. Paul's	10	21	48	38	10	—
St. Mary's	14	15	58	44	14	—
Brassey Street	13	45	65	52	13	—
Bidston Avenue.....	22	19	27	22	5	—
St. James's.....	3	8	23	13	10	—
Laird Street	11	48	78	65	13	—
St. Catherine's	15	16	50	24	—	26
Tranmere H.G.	6	16	17	—	—	17
St. Luke's	27	34	44	—	—	44
Totals	247	514	990	785	114	90

* 1 case left district (not included in this total).

