

[Report 1895] / Medical Officer of Health, Bolton County Borough.

Contributors

Bolton (Greater Manchester, England). County Borough Council.

Publication/Creation

1895

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COUNTY

BOROUGH



OF BOLTON.

REPORT

ON THE

HEALTH OF BOLTON

During the year 1895,

BY

FREDERICK E. ADAMS, M.D., M.Ch.

B.P.H., CAMB.; F.C.S.;

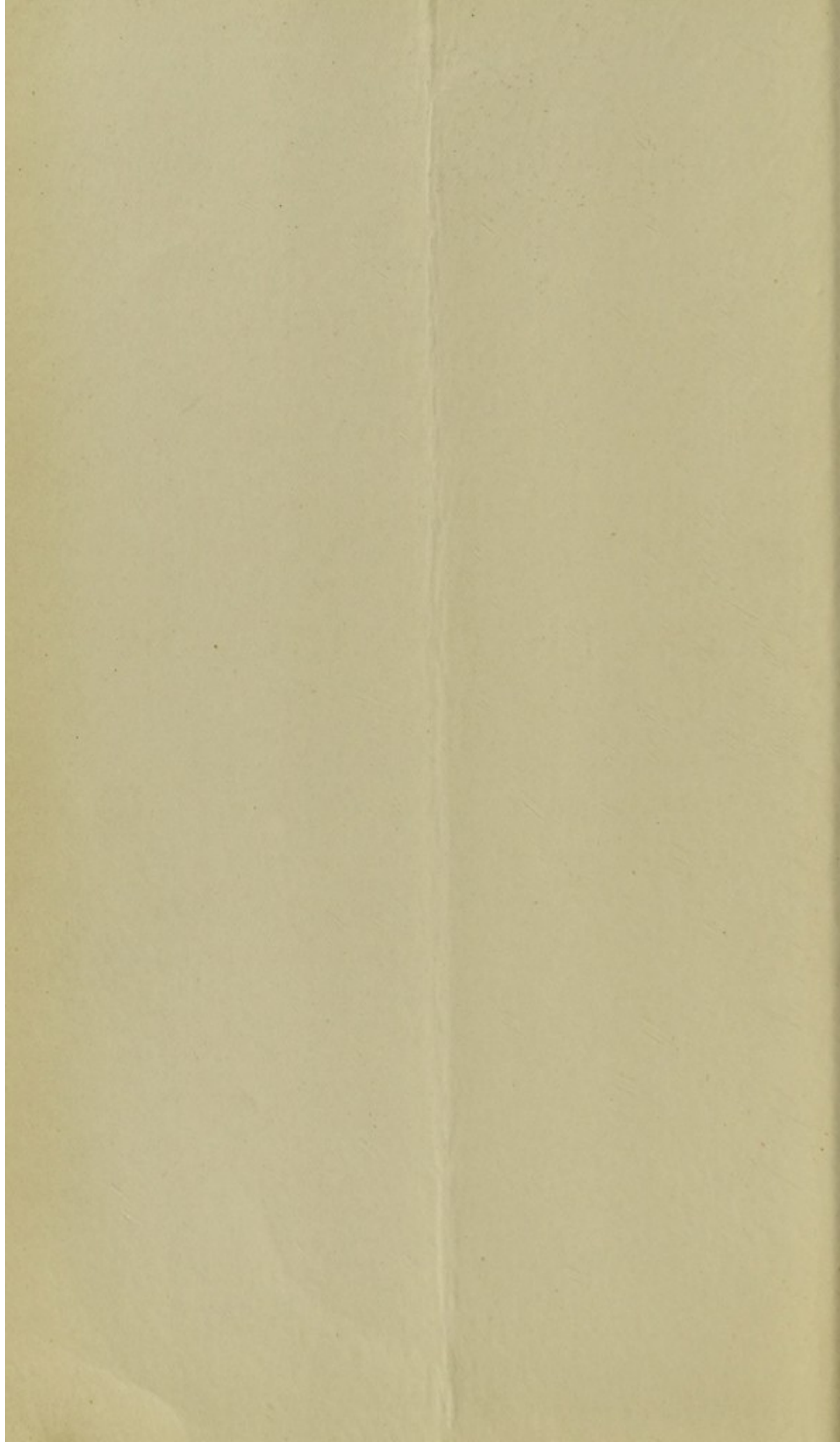
MEDICAL OFFICER OF HEALTH, PUBLIC ANALYST, AND

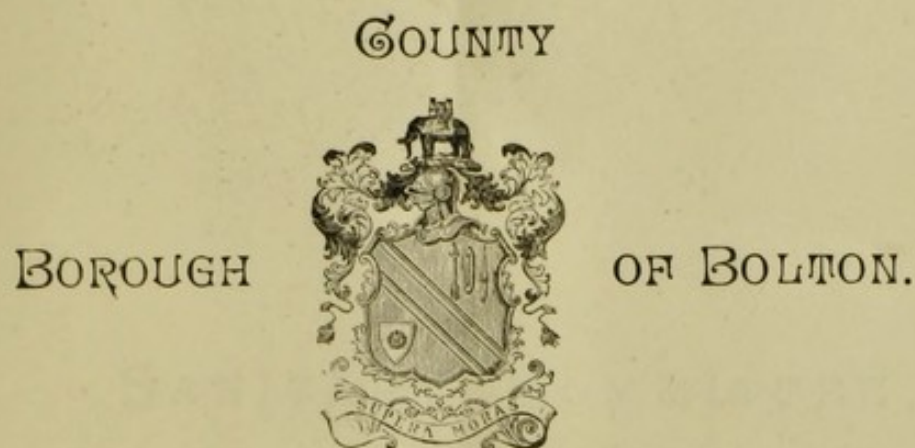
PHYSICIAN TO THE FEVER HOSPITAL.

Bolton :

J. W. CLEDSDALE, PRINTER, STATIONER, ETC., DEANSDALE.

1896.





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GOVERNMENT

OF BOSTON

BOSTON

REPORT

HEALTH OF BOSTON

During the year 1885

FREDERICK E. AUBURN, M.D., MCH.

Public Health Officer

Printed by the City of Boston, 1886

Published by the City of Boston

1886

By the City of Boston, 1886

1886

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MR. J. L. BROWN, Member

MR. J. L. BROWN, Member

TOWN HALL, BOLTON,

16th November, 1896.

GENTLEMEN,

The protracted illness and subsequent death of Dr. F. E. Adams, the late Medical Officer of Health, has caused a delay in the publication of the Health Report for 1895.

This sad circumstance has made it my duty to prepare it for the press.

I have endeavoured to arrange it in conformity with Dr. Adams's previous reports, but cannot supply the comments on the work which would have been so valuable from my lamented predecessor.

I am indebted to Mr. Spencer, the Inspector of Nuisances, Mr. Thompson, Chief Sanitary Inspector, and the Senior Clerk, Mr. Morris, for the summary of the Sanitary Work and the compilation of the various tables.

I am,

Your obedient servant,

JOHN E. GOULD,

MEDICAL OFFICER OF HEALTH.

To the Chairman and Members, Sanitary Committee.

HEALTH OF BOLTON, 1895.

Population.—Taking the rate of increase between 1882-1891 as a basis of calculation, the estimated population in the middle of 1895 was 119337, living on an area of 2361 acres, making 50·5 persons to an acre.

Births.—The births numbered 3960, of which 1999 were males, and 1961 females; the birth rate being 33·1. Of these 177 or 4·4 per cent. were illegitimate. In 1894 the births were 3719, and the birth rate 31·4 per 1,000 per annum.

Deaths.—The deaths numbered 2862, compared with 2215 in 1894, of whom 197 died in the Fishpool Workhouse. 1441 were males, and 1421 were females. The mortality is equivalent to a **death rate of 23·96** per 1000 per annum. This is considerably higher than the death rate for 1894, viz. 18·7, which was the lowest on record, and also higher than the average for the last ten years, 1885-1894, which was 22·1. The death rate for the year in the 33 great towns was 19·45.

TABLE A.

Recorded and Corrected Death Rates per 1,000 Persons living
in 33 Great Towns during the year, 1895, from factors
by the Registrar-General.

Towns, in order of their Corrected Death Rates.	Standard Death Rate.	Factor for Correction for Sex and Age Distri- bution	Recorded Average Death Rate 1895.	Corrected Death Rate 1895.	Compara- tive Mortality Figure 1895.
	Col. 1.	Col. 2.	Col. 3.	Col. 4.	Col. 5.
England and Wales ...	19'15	1'0000	18'71	18'71	1000
England and Wales, less the 33 Towns. ...	19'45	0'9845	17'68	17'41	931
33 Towns ...	17'71	1'0813	20'65	22'33	1193
Croydon ...	18'37	1'0424	14'47	15'08	806
Portsmouth ...	18'73	1'0224	17'83	18'23	974
Derby ...	17'36	1'1031	16'70	18'42	985
Norwich ...	19'99	0'9579	19'34	18'53	990
Leicester ...	17'64	1'0855	17'24	18'71	1000
Bristol ...	18'33	1'0447	18'06	18'87	1009
Brighton ...	18'94	1'0110	18'88	19'09	1020
West Ham ...	17'75	1'0788	17'87	19'28	1030
Plymouth ...	19'70	0'9720	20'11	19'55	1045
Huddersfield ...	16'47	1'1627	16'88	19'63	1049
Swansea ...	17'53	1'0924	18'27	19'96	1067
Cardiff ...	17'16	1'1159	18'21	20'32	1086
Nottingham ...	17'81	1'0752	19'02	20'45	1093
Gateshead ...	17'83	1'0740	19'58	21'03	1124
London ...	17'97	1'0656	19'85	21'15	1130
Birkenhead ...	17'42	1'0993	19'53	21'47	1148
Halifax ...	17'20	1'1133	19'29	21'48	1148
Hull ...	18'23	1'0504	20'84	21'89	1170
Newcastle ...	17'58	1'0892	20'48	22'31	1192
Birmingham ...	17'33	1'1050	20'28	22'41	1198
Leeds ...	17'28	1'1082	20'49	22'71	1214
Bradford ...	16'73	1'1446	19'85	22'72	1214
Sheffield ...	17'22	1'1120	20'46	22'75	1216
Sunderland ...	18'25	1'0493	21'79	22'86	1222
Oldham ...	16'72	1'1453	21'97	25'16	1345
Wolverhampton ...	18'30	1'0464	24'38	25'51	1363
Preston ...	17'42	1'0993	23'89	26'26	1404
Burnley ...	16'67	1'1487	23'38	26'86	1436
Manchester ...	16'90	1'1331	24'51	27'77	1450
Bolton ...	16'90	1'1331	23'96	27'15	1451
Blackburn ...	17'05	1'1231	24'30	27'29	1459
Salford ...	17'03	1'1244	25'65	28'84	1541
Liverpool ...	17'26	1'1094	28'79	31'94	1707

TABLE B.

Compiled from the Registrar-General's Reports, in order to show the Comparative Mortality of Bolton with thirty-two other large English Towns.

BOROUGHs, &c.	Estimated Population, 1895	Persons to an Acre, 1895	Annual Rate of Mortality per 1000 living		Deaths under one year to 1000 Births Registered	Percentage to Total Deaths Registered upon Information of the Coroner's Inquests.
			From all Causes	From Seven Principal Zymotics		
London	4,392,346	58·8	19·8	2·63	165	8·7
West Ham	249,473	53·0	17·8	3·23	168	4·8
Croydon	114,923	12·8	14·4	1·31	133	8·8
Brighton	119,604	47·3	18·8	1·75	164	4·3
Portsmouth	174,751	40·5	17·8	2·13	174	6·7
Plymouth	89,096	57·9	20·0	1·92	180	5·8
Bristol	228,139	51·1	18·0	1·29	143	7·8
Cardiff	155,637	25·7	18·2	2·43	179	7·6
Swansea	97,008	19·1	18·2	1·68	178	5·4
Wolverhampton...	85,780	24·3	24·3	4·23	221	5·9
Birmingham	496,751	39·1	20·2	2·66	183	3·1
Norwich	107,127	14·2	19·3	2·72	191	6·2
Leicester	193,839	22·6	17·2	2·98	205	5·7
Nottingham	226,658	20·7	19·0	2·23	191	5·5
Derby	100,272	29·1	16·7	1·95	161	9·4
Birkenhead	107,469	30·8	19·5	2·35	174	7·4
Liverpool	503,967	96·7	28·7	4·01	211	6·7
Manchester	524,865	40·7	25·2	3·72	204	7·3
Salford	208,253	40·3	25·6	4·96	231	5·3
Oldham	141,079	29·8	21·9	2·79	189	5·7
Burnley	99,591	25·4	23·3	3·87	245	3·8
Blackburn	127,615	18·3	24·3	5·62	241	3·6
Preston	112,638	27·5	23·9	3·76	249	3·1
Huddersfield	99,482	8·4	16·9	1·20	156	3·9
Halifax	93,813	11·0	19·2	1·30	156	5·6
Bradford	226,384	21·0	19·8	2·50	203	5·8
Leeds	395,546	18·3	20·5	2·69	191	8·0
Sheffield	342,768	17·4	20·4	3·17	198	4·2
Hull	216,722	26·3	20·8	3·32	206	4·6
Sunderland	137,705	48·0	21·8	3·50	191	7·1
Gateshead	95,871	30·6	19·5	2·87	186	7·7
Newcastle-on-Tyne	207,021	38·5	20·4	2·52	187	8·9
BOLTON	119,337	50·6	24·0	4·45	213	6·6

As the Registrar General's Returns do not begin and terminate on the first and last days of the year respectively, the birth and death rates in the above table are not absolutely correct, but they are sufficiently approximate for comparative purposes.

TABLE C.
DEATH RATES FOR 45 YEARS.

YEAR	Death rate per 1000 per annum	YEAR	Death rate per 1000 per annum
1851	31'0	1871	26'1
1852	35'3	1872	28'0
1853	33'6	1873	23'3
1854	29'0	1874	24'3
1855	31'1	1875	26'0
1856	27'8	1876	23'6
1857	31'8	1877	23'5
1858	28'6	1878	22'0
1859	29'0	1879	21'0
1860	29'9	1880	20'5
1851-60	30'7	1871-80	23'8
1861	30'9	1881	19'1
1862	25'5	1882	21'3
1863	27'0	1883	19'9
1864	28'6	1884	24'0
1865	26'3	1885	20'7
1866	29'2	1886	23'1
1867	29'0	1887	21'2
1868	25'0	1888	21'6
1869	26'7	1889	22'0
1870	27'3	1890	25'8
1861-70	27'5	1881-90	21'8
		1891	21'8
		1892	22'7
		1893	23'9
		1894	18'7
		1895	23'9
		1891-5	22'2

The following table shows the deaths in each of the four quarters of the year:—

	Males.	Females.	Total.	Annual Rate per 1,000
First Quarter.....	392	384	776	26.0
Second „	350	333	683	22.9
Third „	395	363	758	25.4
Fourth „	304	341	645	21.6
Year.....	1441	1421	2862	23.9

The wards with the highest death rates, were Derby Ward, 28.6; Exchange, 26.5; East Ward, 24.9, and the lowest Church Ward, 14.6. The position of Bolton with regard to the 33 great towns, is shown in Table A, the comparative mortality figure being exceeded only by three other towns, viz., Blackburn, Salford and Liverpool.

Infant and Infantile Mortality.—1,318 deaths of children under 5 years of age occurred, of whom 840 were under 1 year; that is 46 per cent. of the total deaths were those of children under 5 years of age, and 29 per cent. under 1 year; the average for the last 10 years being 41 and 14 per cent. respectively. The Infantile Mortality, *i.e.*, the number of deaths per 1,000 births, was 213, and was exceeded by five other towns, viz., Wolverhampton, Salford, Burnley, Blackburn and Preston.

Chief Causes of Death.—The total increase of deaths compared with 1894, was 647, and these are accounted for under the following headings, the largest increase being in miasmatic or zymotic, diarrhoeal and digestive.

TABLE D.

	1895.	1894.	Increase..
Miasmatic } Zymotic ...	318	134	184
Diarrhoea } ...	208	68	140
Dietetic	38	13	25
Constitutional	349	323	26
Developmental	256	224	32
Nervous	395	329	66
Respiratory	620	557	63
Digestive	217	138	79
Urinary	76	56	20
Ill-defined	101	89	12

Zymotic Deaths.—324, or one half of the increase over 1894, was due to this cause, the largest being diarrhoea 140, measles 100 and fever 26 (see Table III). The death-rate from the seven chief zymotics was 4·45, as compared with 2·83 for the 33 great towns, and 3·16 the average for Bolton for the last ten years. Diarrhoea alone caused a death-rate of 1·74, and measles, 1·00.

Smallpox.—One death from smallpox occurred in the Borough Hospital, that of an unvaccinated infant, 8 months old. There were 10 cases during the year, the details being given below.

Date.	Initials.	Age.	Address.	Type.	State of Vaccination.	Remarks.
2 May	M. P.	25	25, Frank-st.	Discrete	3 marks, infancy	
2 "	E. P.	13	" "	Discrete	3 marks, infancy	
12 "	A. P.	19	" "	Discrete	3 marks, infancy	
15 "	E. L.	19	7, Pen-st.	Confluent	Unvaccinated	
15 "	E. C.	15	33, Lena-st.	Confluent	Unvaccinated	
22 "	S. S.	3	52, Clarence-st.	Discrete	Unvaccinated	
25 "	G. C.	5	33, Lena-st.	Confluent	Unvaccinated	
27 "	E. C.	6	" "	Simple	Unvaccinated	Till 10 days before admission.
29 "	C. W.	25	10, Uttley-st.	Confluent	Unvaccinated	
31 "	D. C.	8/12	33, Lena-st.	Confluent	Unvaccinated	Died.

Notification of Infectious Diseases.—The following Table gives the number of cases of infectious diseases, reported by the medical practitioners of the town during each quarter of the year, and also the number of deaths resulting therefrom :—

QUARTERS.	INFECTIOUS CASES.						Total Number of Infectious Diseases
	Small-pox	Scarlet Fever	Diphtheria	Typhoid Fever	Puerperal Fever	Relapsing Fever	
1st Quarter	—	30	10	47	2	—	89
2nd Quarter	10	39	7	14	1	—	71
3rd Quarter	—	125	7	68	1	—	201
4th Quarter	—	301	10	108	3	1	423
Year 1895	10	495	34	237	7	1	784
Year 1894	1	267	25	117	16	1	428
Total deaths in year ...	1	20	15	50	—	—	86

A large increase will be noticed in scarlet fever and typhoid fever, a slight one in diphtheria and smallpox, and a decrease in puerperal fever.

The Borough Fever Hospital.—The following Table shows the number of patients admitted to the Hospital during the year, together with their ages and the disease from which they suffered :—

AGE—YEARS	ALL CAUSES		SMALLPOX		SCARLET FEVER		ENTERIC FEVER.	
	Patients Admitted	Deaths	Patients Admitted	Deaths	Patients Admitted	Deaths	Patients Admitted	Deaths
Under 3	9	2	1	1	7	1	1	—
Between 3 and 4	16	—	1	—	15	—	—	—
" 4 " 6	35	—	1	—	34	—	—	—
" 6 " 10	62	—	1	—	61	—	—	—
" 10 " 20	37	1	4	—	32	1	1	—
" 20 " 40	9	—	2	—	5	—	2	—
40 and upwards...	—	—	—	—	—	—	—	—
Total.....	168	3	10	1	154	2	4	—

The period during which patients were detained in the Hospital averaged $53\frac{1}{2}$ days; the stay of patients suffering from smallpox averaged $37\frac{1}{2}$ days; typhoid fever, 50 days, and scarlet fever, $54\frac{1}{2}$ days. During the year 1 smallpox patient, and two scarlet fever patients died. The number of patients under treatment on December 31st, was 37; the total expenditure on the Hospital for the year was £1,297 5s. 7d.; the cost per patient amounted to £7 14s. 6d., and the cost per week per patient to £1 0s. 1½d.

Articles Analysed under the "Sale of Food and Drugs Act 1875," for the year ending December 31st, 1895.

No. of Article	Articles submitted	Result of Analysis.	Observations.
1	Butter.....	Genuine.....	
2	Margarine	Genuine.....	Fined 2/6 and costs for selling without a label
3	Irish Whisky.....	Genuine.....	
4	Irish Whisky.....	Genuine.....	
5	Brandy	Genuine.....	
6	Brandy	Genuine.....	
7	Irish Whisky.....	Adulterated by the addition of of an excess of water	Cautioned
8	Brandy	Genuine.....	
9	Scotch Whisky..	Adulterated by the addition of an excess of water	Cautioned
10	Scotch Whisky...	Genuine.....	
11	Scotch Whisky...	Genuine.....	
12	Gin	Genuine.....	
13	Gin	Adulterated by the addition of an excess of water	Cautioned
14	Gin	Adulterated by the addition of an excess of water	Cautioned
15	Milk	Genuine.....	
16	Milk	Genuine.....	
17	Milk	Genuine.....	
18	Butter.....	Genuine.....	
19	Butter.....	Genuine.....	
20	Butter.....	Genuine.....	
21	Butter.....	Genuine.....	
22	Coffee.....	Genuine.....	
23	Coffee.....	Genuine.....	
24	Coffee.....	Genuine.....	
25	Milk	Genuine.....	
26	Milk	Genuine.....	
27	Milk	Impoverished by the abstraction of 20 per cent of fat.....	Fined 2/6 and costs
28	Milk	Genuine.....	
29	Milk	Genuine.....	
30	Milk	Genuine.....	
31	Milk	Genuine.....	
32	Milk	Genuine.....	
33	Butter.....	Genuine.....	
34	Butter.....	Genuine.....	
35	Butter.....	Genuine.....	

Number of Samples Analysed during the year—

Milk.....	11
Butter	8
Margarine	1
Spirits	12
Coffee	3
Samples Adulterated	5
Convictions	2

Cowsheds.

Total number of Cowsheds on register at end of year ... 19

Dairies and Milkshops.

Total number of Milksellers and Dairymen on register at end of year 277

Number of applications for registration as Milksellers ... 31

Cattle Inspected before Slaughter.

BEASTS.	CALVES.	SHEEP and LAMBS.	PIGS.
8928	1245	40875	10179

Number of Store Cattle Inspected at the Cattle Fairs and Cattle Sidings.

STORE COWS.	BULLS.
1256	240

Animals and Unwholesome Food Condemned and destroyed as unfit for Human Consumption.

9	Beasts
12	Sheep
3	Calves
6	Pigs
3000	Oranges
15 cwt.	Apples
2075 lbs.	Fruit
47 cwt.	Meat
378 lbs.	Liver
2361 lbs.	Fish
740 lbs.	Herrings
295	Rabbits
82	Fowls
10	Geese
1	Turkey

Number of Persons Summoned before Justices for Exposing Diseased and Unwholesome Food.

SUMMONED.	CONVICTED.	AMOUNT OF FINES.
6	5	£7 17s. and costs.

Unhealthy Dwellings.

No. of houses declared unfit for habitation	...	...	29
Do. obstructive	...	...	18

Do.	closed	...	...	...	...	2
Do.	made fit for habitation	...	...	...	...	6

Some of the above were declared unfit under the local Acts, but the obstructive ones under the Housing Working Classes Act, 1890.

Inspectors' Work, 1895.

Nuisances

Nuisances reported by Inspectors	...	...	...	4963
Do. Inhabitants	...	...	...	119
Notices issued	...	...	...	1875
Nuisances abated without formal notice	...	...	...	3207
Do. undergoing abatement	...	...	...	800
Do. remaining unabated	...	...	...	180
Total nuisances abated	...	...	...	4102
Number of informations for Breach of bye-laws	...	...	...	1
Do. Fined	...	...	...	1

Amount of Fines, exclusive of costs, 20/-

Smoke observations taken	...	...	...	433
Do. nuisances reported	...	...	...	57
Do. notices served	...	...	...	93
Number of Informations	...	...	...	34
Do. Fined	...	...	...	17
Do. Dismissed	...	...	...	15
Do. Cases withdrawn	...	...	...	2

Amount of Fines, exclusive of costs, £7.

House to House Visitation

Number of houses examined	...	...	...	4432
Do. Sanitary defects discovered therein and abated	...	...	...	110
Do. reported to District Inspectors	...	...	...	74

Lodging Houses

Day Inspections	...	...	...	1322
Night Do.	...	...	...	10

Infectious Diseases in Houses —

1093 of the street houses examined contained 1171 cases.

Inspection of Schools

Schools examined	...	...	...	12
Do. found clean	...	...	...	11
Do. found dirty	...	...	...	1
Do. disinfected and cleansed	...	...	...	1

Inspection of Mill Lodges

Mill Lodges examined	...	...	...	...	90
Do. found clean	...	...	...	...	74
Do. found foul	...	...	...	...	16
Do. cleansed	...	...	...	...	14

Canal Boats Act, 1877 and 1884

Canal Boats examined	26
Do. found satisfactory	...	...	...	...	26

Inspection of Workshops

Number of Visits—Workshops examined	...	...	686
Do. Do. limewashed without notice...			29
Do. Do. notices issued to limewash...			29
Number of Workshops on Register	...	...	574
Bakehouses Do. ...	...	...	144
Do. limewashed without notice	...	...	21
Do. notice served	...	...	8
73 Vans, containing 165 persons were examined. One van had the children sick with measles ; the van was removed to vacant land.			

DISINFECTION.

1895.	No. of Rooms Disinfected.	No. of Beds Disinfected.	No. of other Articles Disinfected.
January	28	21	174
February.....	64	31	235
March	83	31	283
April	55	21	141
May.....	76	40	275
June.....	68	26	174
„ July	67	22	226
August	85	44	220
September.....	119	43	256
October	111	52	330
November	267	108	597
December	305	126	712
Total	1328	565	3623

TABLE I.
ANNUAL MORTALITY FOR THE LAST TEN YEARS COMPARED WITH 1895 IN
CERTAIN AGE PERIODS.

YEAR.	Estimated Population.	Total Deaths.	Rate of Mortality per 1,000 Living	Deaths of children under 1 year.	Deaths of children between 1 and 5 years.	Percentage of Deaths under 5 years to Total Deaths.	Deaths at 60 years and upwards.	Deaths from Principal Zymotic diseases.	Percentage of Deaths from Principal Zymotic Causes to Total Deaths.
1885...	110,085	2,282	20.7	612	307	40.2	461	212	9.2
1886...	111,214	2,572	23.1	697	472	45.4	512	493	15.9
1887...	112,354	2,393	21.2	625	401	42.8	476	411	14.3
1888...	113,506	2,453	21.6	636	368	40.9	476	402	12.3
1889...	114,670	2,528	22.0	630	485	44.1	474	520	18.0
1890...	115,846	2,986	25.8	640	483	37.6	642	498	16.6
1891...	115,253	2,516	21.8	649	352	39.5	544	256	10.1
1892...	116,261	2,648	22.7	711	397	41.8	497	342	12.9
1893...	117,278	2,813	23.9	764	495	44.7	577	519	18.4
1894...	118,303	2,215	18.7	593	270	38.9	432	189	8.5
Annual Average for 10 years 1885-1894	.....	2,540	22.1	655	403	41.5	509	384	13.6
1895...	119,337	2,862	23.9	840	478	46.0	542	482	29.0

TABLE II.
DEATHS IN CERTAIN AGE PERIODS IN THE FOUR
QUARTERS.

AGES.	QUARTERS				TOTAL DEATHS DURING YEAR	
	Mar.	June	Sep.	Dec.	Deaths	Rate per 1000 of the Population.
Deaths under 1 Month	50	36	56	49	191	1.60
„ between 1 and 6 Months	60	50	154	87	351	2.94
„ „ 6 „ 12 Months	46	88	119	45	298	2.49
„ „ 1 year & 5 years	125	149	117	87	478	4.00
„ „ 5 years & 25 years	70	34	48	74	226	1.89
„ „ 25 „ 45 „	106	85	81	105	377	3.15
„ „ 45 „ 65 „	183	144	106	118	551	4.61
„ „ 65 „ above...	136	97	77	80	390	3.26
DEATHS AT ALL AGES	776	683	758	645	2862	23.9

TABLE III.
DEATHS FROM THE SEVEN PRINCIPAL ZYMOLOGICS DURING THE TEN YEARS 1885-1894
WITH THE NUMBER OF DEATHS IN 1895.

DISEASE.	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	Annual Average of 10 Years 1885-1894	Proportion of Deaths to 1000 Deaths in 10 Years 1885-1894	1895	Proportion of Deaths to 1000 Deaths in 1895
Smallpox ...	1	—	—	1	—	—	—	—	6	—	0.8	0.3	1	.3
Measles ...	38	137	91	34	160	97	55	43	162	20	83.7	32.9	120	41.9
Scarlet Fever...	9	16	37	52	65	56	21	30	34	10	33.0	12.9	20	6.9
Diphtheria ...	5	7	7	7	29	14	10	13	8	5	10.5	4.1	15	5.2
Whooping Cough...	58	75	28	57	64	107	44	7	78	61	57.9	22.7	67	23.4
Fever ...	18	18	35	38	32	26	32	20	34	25	27.8	10.9	51	17.8
Diarrhoea ...	83	156	146	113	105	110	94	129	197	68	120.1	47.2	208	72.6
TOTAL...	212	409	344	302	455	410	256	242	519	189	333.8	131.3	482	178.4

TABLE IV.
INFANTILE MORTALITY IN THE DIFFERENT WARDS
IN THE FOUR QUARTERS.

WARDS.	QUARTERS				Year	Percentage of Deaths under 5 Years to Total Deaths.
	Mar.	June	Sep.	Dec.		
East ... { Total Deaths	74	72	85	59	290	} 56.2
... { Below 5 Years	35	45	54	29	163	
West ... { Total Deaths	139	123	169	117	548	} 49.0
... { Below 5 Years	57	58	99	55	269	
North ... { Total Deaths	33	23	25	28	109	} 49.5
... { Below 5 Years	12	9	20	13	54	
Halliwell ... { Total Deaths	84	69	78	74	305	} 51.8
... { Below 5 Years	39	35	54	30	158	
Exchange ... { Total Deaths	50	60	43	38	191	} 50.7
... { Below 5 Years	20	30	30	17	97	
Bradford ... { Total Deaths	133	103	125	103	464	} 50.3
... { Below 5 Years	51	53	81	48	233	
Derby ... { Total Deaths	124	133	130	131	518	} 47.1
... { Below 5 Years	45	65	81	53	244	
Church ... { Total Deaths	44	35	32	25	136	} 30.8
... { Below 5 Years	13	11	13	5	42	
Rumworth ... { Total Deaths	28	27	22	27	104	} 42.3
... { Below 5 Years	7	13	11	13	44	
Municipal } { Total Deaths	67	38	49	43	197	} 7.1
Paupers } { Below 5 Years	2	4	3	5	14	
Fishpool }						
Borough ... { Total Deaths	776	683	758	645	2862	} 46.0
... { Below 5 Years	281	323	446	268	1318	

TABLE V.
CERTIFICATION OF THE CAUSES OF DEATH IN THE
DIFFERENT WARDS.

WARDS.	Total Deaths	Certified by		Not Certi- fied	Proportion per cent. of Deaths.		
		Regis- tered Medical Practi- tioner	Coroner		Certified by		Not Certified
					Regis- tered Medical Practi- tioner	Coroner	
Exchange	191	174	16	1	91.5	8.3	0.5
Bradford	464	447	16	1	96.3	3.4	0.2
Derby	518	462	55	1	89.1	10.6	0.1
Church	136	124	12	—	91.1	8.8	—
Rumworth	104	98	6	—	94.2	5.7	—
East	290	278	12	—	95.8	4.1	—
West	548	529	18	1	96.7	3.2	0.1
North	109	102	7	—	93.5	6.4	—
Halliwell	305	291	13	1	95.4	4.2	0.3
Municipal Paupers Fishpool	197	196	1	—	99.9	0.5	—
Borough of Bolton	2,862	2,701	156	5	94.7	5.4	0.1

TABLE VI.

ESTIMATED POPULATION, BIRTHS, BIRTH-RATE, DEATHS, AND RATE OF MORTALITY PER 1,000 DURING THE TWELVE MONTHS ENDING DECEMBER 31, 1895, CLASSIFIED ACCORDING TO WARDS, &c.

STATISTICAL DIVISIONS.	Population at all Ages Estimated to Middle of 1895.	BIRTHS.		DEATHS.		DEATHS FROM							
		In 12 Months ending Dec. 31st, 1895.	Rate per 1000.	In 12 Months ending Dec. 31st, 1895.	Rate per 1000.	Class 1 Zymotic Diseases	Class 2 Dietetic Diseases	Class 3 Constitutional Diseases	Class 4 Developmental Diseases	Class 5 Local Diseases	Class 6 Diseases of Parturition	Class 7 Violence	Class 8 Ill-defined Causes
BOROUGH OF BOLTON.	119,337	3,960	33.1	2,862	23.9	534	38	349	256	1504	14	66	101
Exchange Ward	7,198	245	34.0	191	26.5	37	3	22	4	116	—	4	5
Radford Ward...	19,133	646	33.7	464	24.2	105	4	59	46	232	3	4	11
Derby Ward ...	18,067	644	35.6	518	28.6	83	5	41	34	292	7	34	22
Church Ward ...	9,263	181	19.5	136	14.6	27	—	15	9	74	—	6	5
Sumworth Ward	5,087	194	38.1	104	20.4	23	—	10	14	51	1	1	4
East Ward ...	11,632	411	35.3	290	24.9	61	5	39	18	152	1	5	9
Vest Ward ...	27,047	906	33.4	548	20.2	109	15	65	52	286	1	3	17
North Ward ...	6,866	183	26.6	109	15.8	22	2	10	8	60	—	4	3
Calliwell Ward...	15,044	531	35.2	305	20.2	54	3	53	29	146	1	5	14
Municipal paupers, Fishpool	—	19	—	197	—	13	1	35	42	95	—	—	11

TABLE VII.
DEATHS FROM THE PRINCIPAL ZYMOTIC DISEASES,
WITH THEIR DISTRIBUTION ACCORDING TO WARDS,
AND COMPARATIVE PERCENTAGE.

WARDS		Deaths from all Causes	DISEASE										Per Centages of Zymotic Deaths to Deaths from all Causes
			Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	FEVER			Diarrhoea	Total	
								Typhus	Typhoid	Continued			
East	290	0	12	1	2	6	0	5	1	28	55	18·9	
West	548	0	19	4	3	13	0	10	0	49	98	17·8	
North	109	0	2	0	0	2	0	3	0	13	20	18·3	
Halliwell	305	0	12	3	0	12	0	9	0	15	51	16·3	
Exchange	191	0	14	0	1	3	0	3	0	16	37	19·3	
Bradford	464	0	33	3	3	12	0	7	0	37	95	20·4	
Derby	518	0	15	4	5	12	0	6	0	35	77	14·8	
Church	136	0	7	1	1	4	0	3	0	7	23	16·9	
Rumworth.....	104	1	3	4	0	3	0	2	0	8	21	20·1	
Municipal Paupers Fishpool	197	0	3	0	0	0	0	2	0	0	5	2·5	
BOROUGH	2,862	1	120	20	15	67	0	50	1	208	482	16·8	

TABLE VIII.—GOVERNMENT RETURN. (A)

Table of Deaths during the Year 1895, in the Urban Sanitary District of Bolton, classified according to Diseases, Ages and Localities, and showing also the Population of such Localities, and the Births therein during the Year.

NAMES OF LOCALITIES adopted for the pur- pose of these Statistics.	Population at all ages.			Mortality from all causes at subjoined Ages.										Mortality from subjoined causes, Distinguishing Deaths of Children under Five Years of Age.																										
	Census. 1891.	Estimated to middle of 1895.	Registered Births	At all Ages.						Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 & upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Group.	Whooping Cough.	Continued Fever.				Diarrhoea or Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneu- monia & Pleurisy.	Heart Disease.	Injuries.	Other Causes.			
				19	20	21	Enteric or Typhoid.	Other or Doubtful.	13													14	15	16	17													18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33								
Exchange Ward..	7,740	7,198	245	191	53	44	5	6	53	30	{ Under 5 5 upwds	12	2	...	1	2	3	...	...	15	...	...	...	...	...	...	...	2	20	...	...	...	42						
Bradford Ward ...	18,716	19,133	646	464	149	84	17	20	118	76	{ Under 5 5 upwds	33	2	2	2	3	11	...	3	35	1	2	13	33	10	2	30							
Derby Ward	17,271	18,067	644	*518	161	83	25	26	139	84	{ Under 5 5 upwds	14	3	4	5	12	...	6	...	2	4	32	55	24	1	103							
Church Ward ...	8,640	9,263	181	136	25	17	9	4	48	33	{ Under 5 5 upwds	7	1	1	1	3	4	...	6	...	35	...	2	...	1	20	69	25	15	130							
Rumworth Ward..	4,516	5,087	194	104	33	11	2	4	27	27	{ Under 5 5 upwds	...	3	2	...	3	3	...	3	...	5	...	...	...	...	...	...	9	13	17	3	45							
East Ward	11,712	11,632	411	290	98	65	8	11	67	41	{ Under 5 5 upwds	12	...	2	2	2	6	...	2	...	8	...	...	...	...	...	...	...	6	6	7	...	17						
West Ward	26,015	27,047	906	548	183	86	19	19	139	102	{ Under 5 5 upwds	19	3	1	1	4	13	...	5	...	26	1	...	...	...	...	...	15	31	7	2	63							
North Ward	6,580	6,866	183	109	36	18	8	6	20	21	{ Under 5 5 upwds	2	...	1	2	1	2	...	10	...	48	2	2	1	...	...	...	29	60	30	...	142							
Halliwell Ward...	13,812	15,044	531	305	94	64	11	20	68	48	{ Under 5 5 upwds	12	2	...	4	12	...	3	...	13	...	1	...	...	...	...	...	5	10	8	3	24							
Municipal Paupers- Fishpool Workhouse	.....	.....	19	197	8	6	...	6	97	80	{ Under 5 5 upwds	3	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	25	52	6	...	7							
TOTALS.....	115,002	119,337	3,960	2,862	840	478	104	122	776	542	{ Under 5 5 upwds	117	12	10	25	66	...	1	1	199	...	...	...	3	...	...	...	13	213	15	5	637							
											{ Under 5 5 upwds	3	8	5	6	1	...	49	...	9	...	15	...	3	...	...	...	174	353	146	28	743							

* Including the deaths of 25 persons not belonging to the Borough which took place in the Infirmary.

TABLE IX.—LOCAL GOVERNMENT RETURN. (B)

Table of New Cases of Sickness, coming to the knowledge of the Medical Officer of Health during the Year 1895, in the Urban Sanitary District of Bolton, classified according to Localities and Diseases.

NAMES OF LOCALITIES	New Cases of Sickness in Persons belonging to the District, distinguishing those in Children under Five Years of Age																		
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Other Diseases, such as Chicken Pox, or Pneumonia, which the Medical Officer of Health thinks well to record	
1		Small-pox	Measles	Scarlatina	Diphtheria	Croup (not "spasmodic")	Whooping Cough	Continued Fevers Typhus Enteric or Typhoid Other or Doubtful			Diarrhoea and Dysentery	Cholera	Rheumatic Fever	Erysipelas	Pyæmia	Puerperal Fever	Ague		
Exchange Ward	{ Under 5 5 upwds	.....	.....	6	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bradford Ward	{ Under 5 5 upwds	.....	.....	8	1	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Derby Ward	{ Under 5 5 upwds	.....	.....	46	3	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	60	1	.....	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Church Ward	{ Under 5 5 upwds	.....	.....	48	3	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	50	5	.....	.....	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rumworth Ward	{ Under 5 5 upwds	.....	.....	8	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	22	1	.....	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Ward	{ Under 5 5 upwds	.....	.....	6	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	12	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Ward	{ Under 5 5 upwds	.....	.....	10	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	20	5	.....	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Ward	{ Under 5 5 upwds	.....	.....	25	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	64	5	.....	.....	.....	48	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Halliwell Ward	{ Under 5 5 upwds	.....	.....	12	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Under 5 5 upwds	.....	.....	24	1	.....	.....	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TOTALS	{ Under 5 5 upwds	.....	.....	25	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		4	.....	49	5	.....	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		2	.....	186	10	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		8	.....	309	24	.....	.....	.....	223	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE X.—METEOROLOGICAL OBSERVATIONS.

(From Returns supplied by Mr. Minglev.)

1865.	BAROMETER.		READINGS OF THERMOMETERS.										Rain.	Mean amount of clouds.	Amount collected.	Registered sunshine in hours.	Mean amount of ozone, 10 = max, 0 = none.
	Corrected and reduced to 32 deg. Fah. at mean sea level.		Highest	Lowest	Mean.	Range	Dew-point	Maxi- mum in rays of sun	Mini- mum on grass	Elastic force of the aqueous vapour.	Mean de- gree of humi- dity. Satu- ration = 100						
January	36.1	27.8	32.35	8.3	27.2	58.0	24.9	0.153	83.1	7.5	4.328	39.50	0.64		
February	35.2	25.0	29.53	10.4	22.9	61.7	20.7	0.133	80.3	7.2	0.578	28.00	0.61		
March	46.1	35.0	39.47	11.2	36.1	75.0	31.1	0.215	89.0	8.8	4.100	51.5	1.00		
April	52.7	39.3	44.77	13.4	38.4	88.9	34.1	0.238	76.8	7.2	2.302	109.50	1.23		
May	64.4	45.3	52.58	17.1	43.1	97.9	37.9	0.286	65.6	4.9	0.565	191.5	1.42		
June	65.2	48.5	55.65	16.8	48.5	109.9	41.3	0.348	70.6	6.8	2.099	180.20	1.37		
July	64.1	51.2	56.00	12.9	49.8	104.6	45.6	0.363	57.9	7.8	5.441	140.20	1.74		
August	65.8	52.5	57.66	13.3	52.6	107.7	47.1	0.400	80.1	8.4	4.766	120.5	1.60		
September	67.9	51.9	58.97	16.0	52.5	106.3	43.5	0.400	78.1	5.2	1.613	136.10	0.66		
October	49.8	38.8	43.22	10.0	39.6	76.5	32.1	0.261	87.5	8.2	4.246	68.0	1.26		
November	49.4	40.2	44.58	9.2	40.9	66.1	34.1	0.261	88.5	8.4	3.760	32.55	0.86		
December	42.4	34.7	38.67	7.7	35.9	51.7	29.7	0.209	89.1	8.8	4.711	11.30	1.74		
Mean	53.3	40.9	46.12	12.2	40.6	83.7	35.2	0.272	78.9	7.4	3.209	92.25	1.18		

CAUSES OF DEATH.

[illegible]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Class I.																															
ORDER 1.																															
Smallpox	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	52	68	...	17	16	34	50	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	9	11	1	1	1	3	7	4	1	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	8	7	...	...	...	7	3	1	3	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	24	26	...	...	...	...	1	5	3	8	9	10	9	...	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	21	46	9	9	21	11	25	1	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	3	3	2	2	...	...	1	...	...	2	1	8	...	...	6	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	23	13	...	...	...	...	1	...	...	...	...	...	...	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Varicella	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simple Fever	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 2.																															
Diarrhoea	108	100	77	78	26	18	...	...	1	...	...	1	...	2	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 3.																															
Syphilis	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 4.																															
Septicæmia	1	5	...	...	...	...	1	...	...	...	1	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class II.																															
Starvation	17	12	17	11	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alcoholism	5	3	...	...	...	...	...	...	...	...	...	4	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scurvy	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class III.																															
Cancer	21	39	...	...	...	...	...	...	...	...	...	1	7	17	27	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	116	71	2	...	...	6	5	4	6	23	15	50	34	30	10	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatism	10	5	...	...	...	...	2	2	1	2	3	3	1	2	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diabetes	4	1	...	...	...	...	...	...	...	1	...	...	1	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia	33	28	26	...	...	7	2	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tabes Mesenterica	9	10	4	6	4	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purpura	1	1	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class IV.																															
Premature Birth	32	35	32	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dentition	29	19	15	12	14	7	...	...	...	...	...	...	4	6	...	47	71	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Old Age	54	82	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spina Bifida	1	3	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class V.																															
ORDER 1.																															
Meningitis	35	28	12	5	16	15	3	...	3	...	2	3	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrocephalus	6	2	4	2	2	...	...	...	...	...	...	...	4	8	7	4	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hemiplegia	14	22	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Locomotor Ataxy	1	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	27	30	1	1	...	...	...	...	1	...	1	6	4	12	15	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 2.																															
ORDER 3.																															
ORDER 4.																															

CAUSES OF DEATH—(Continued.)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Epilepsy		6	4	...	2	...	...	2	1	1	...	1	2	2	1	...	...	...	...	1	3	...	...	...	2	...	2	...	...	10
Spasmodic Croup		11	20	...	2	3	7	2	4	...	...	...	...	...	...	...	...	...	...	2	4	...	...	...	3	5	3	4	...	31
Convulsions		86	64	67	49	13	11	3	1	1	1	...	...	1	1	...	1	...	...	13	29	33	5	7	28	21	8	6	...	150
Hernia Cerebri		1	...	1	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Insanity		2	1	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	3
Myelitis		1	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2
Other Diseases of Nervous System		19	13	2	1	...	1	...	1	...	...	4	5	3	4	10	1	...	...	2	5	10	1	2	...	5	1	5	1	32
ORDER 2.																															
Pericarditis .....		...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Endocarditis		3	12	1	...	...	...	...	1	...	1	1	3	1	4	...	3	...	...	...	3	3	...	...	...	...	1	...	...	1
Heart Disease (undefined)		66	69	7	5	...	1	1	3	3	4	14	17	22	20	19	19	...	...	10	26	21	15	6	7	30	5	10	5	15
Syncope		4	6	...	1	...	...	...	...	...	...	...	3	2	2	2	...	...	...	...	1	2	2	1	...	...	1	1	2	10
Arterial Disease		2	1	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	1	...	1	...	...	...	1	...	...	...	3
Embolism		2	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	2
Other Diseases of Circulatory System		2	2	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	1	...	2	1	...	...	...	...	...	...	4
ORDER 3.																															
Laryngitis		3	8	2	2	...	4	...	1	...	...	1	...	...	1	...	...	...	...	1	1	5	1	1	...	...	...	...	...	11
Bronchitis		165	168	30	26	2	20	2	1	2	4	16	16	64	57	31	42	...	...	33	52	62	11	2	33	63	13	31	33	333
Pneumonia		113	111	30	25	...	26	4	4	6	...	17	19	22	22	8	6	...	...	20	29	45	9	11	22	39	6	22	21	224
Pleurisy		5	4	...	...	...	...	...	...	...	...	1	2	4	1	...	1	...	...	...	1	5	...	...	1	2	...	1	...	9
Asthma		1	2	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	1	1	...	...	...	3
Emphysema .....		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Other Diseases of Respiratory System		18	21	4	6	6	4	1	1	1	...	1	2	3	5	2	3	...	...	5	9	5	3	...	8	4	2	1	2	39
ORDER 4.																															
Quinsy		2	6	1	2	1	1	3	1	1	1	1	1	1	2	1	8
Gastritis		6	5	4	1	1	1	1	3	2	2	6	...	1	11
Dyspepsia		7	1	4	1	1	2	4	2	1	8
Enteritis		51	35	39	21	4	6	2	1	4	1	1	3	1	3	10	10	20	3	1	1	10	16	3	11	2	86
Intestinal Obstruction		15	15	2	2	4	1	...	...	2	1	2	2	5	6	...	3	...	...	...	3	11	...	...	...	7	1	3	1	30
Peritonitis		10	11	2	2	1	1	1	2	2	2	2	1	2	3	...	...	...	...	...	2	3	1	...	...	7	...	5	1	21
Hepatitis .....		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Hepatic Disease(undefined)		18	18	5	4	...	...	...	...	...	...	2	4	11	8	...	2	...	...	2	2	2	5	2	2	11	...	3	7	36
Gall Stones		1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	1	...	...	...	2
Stricture of Aesophagus		2	1	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	1	1	...	...	...	1	...	...	...	3
Other Diseases of Digestive System		7	4	...	...	3	...	1	...	...	...	...	1	2	2	1	1	...	...	...	1	1	...	...	...	1	...	...	...	...
ORDER 5.																															
Disease of Bladder		6	2	1	...	1	...	1	1	3	1	1	1	3	1	1	...	1	8
Acute Nephritis		10	10	...	...	1	...	1	3	1	...	1	1	5	5	1	1	...	...	...	5	6	...	1	...	6	...	2	...	20
Chronic Bright's Disease		28	20	...	...	...	1	1	...	2	1	8	4	10	9	7	5	...	...	1	4	7	1	...	...	5	5	5	14	48
ORDER 6.																															
Uterine Disease	1	1	1	1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

[illegible]

**STREETS IN WHICH INFECTIOUS DISEASES
HAVE OCCURRED 1895.**

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Abraham-street...	2		1	1						1			1					
Acton-street	2		1			1												
Adelaide-street	1		1															
Ainscow-street	4		1		3					2							2	
Ainsworth-street	1					1												
Albert-street	2				1				1	3							2	1
All Saints'-street										1							1	
Anchor-street...	1				1													
Apple-street and Back	1				1													
Arden-street ...	2		1		1					5							5	
Ardwick-street	1				1					4			3				1	
Argyle-street	3			1						9			2				7	
Ashburner-street										2			1				1	
Ashton-place ...										1							1	
Aspden-street	1				1					1							1	
Atherton-court										3							3	
Auburn-street										1							1	
Avenue-street	1			1						5			3					2
Avondale-street										2			1				1	
Back oth' Bank-street										1							1	
Baldwin-street										3							1	2
Balshaw-street & Back	3		1	2						4			4					
Bamber-street	1				1					1							1	
Bank-place ...	1				1													
Bare-street ...										1			1					
Bark-street and Back	2		1		1													
Barlow-street										2							1	1
Barn-street ...										2							2	
Bashall-street	1			1						1			1					
Battenburg-road										1							1	
Bayley-street										1							1	
Baythorpe-street	1			1						2			2					
Beaconsfield-street	1					1				2							2	
Beckett-street	1		1							3							3	
Belgrave-street	2					2												
Bella-street										1							1	
Bengal-square	1				1					1							1	

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Bertrand-road	1	...	...	...	...	...	...	1	...
Bertwine-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bilboa-street	...	1	...	...	...	1	...	...	...	2	...	...	...	...	...	...	2	...
Birkdale-street	...	1	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
Birmingham-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Blackbank-street	3	...	2	...	...	...	...	1	...
Blackburn-road	...	2	1	...	1	...	...	...	...	3	...	1	...	...	...	...	2	...
Blackhorse-st. & Back	...	2	2	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...
Blake-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Boardman-street	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Bolling-street	1	...	1	...	...	...	...	...	...
Boundary-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bowden-street	1	...	1	...	...	...	...	...	...
Bradshaw-court	...	1	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
Bradshaw-street	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bradshawgate	1	...	...	...	...	...	...	1	...
Brandon-street	...	1	...	...	...	1	...	...	...	2	...	...	...	...	...	...	2	...
Brick-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bride-street	1	...	1	...	...	...	...	...	...
Bridge-street & Back	1	...	...	...	...	...	...	1	...
Bridges-court	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bridgman-place	2	...	...	...	...	...	...	2	...
Bridgman-st. & Back	...	2	1	...	1	...	...	...	...	3	...	2	...	...	...	...	1	...
Bridgman-st. Lower	1	...	1	...	...	...	...	...	...
Bright-street	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Broach-street	1	...	...	...	...	...	...	1	...
Brooklyn-street	2	...	...	...	...	...	...	2	...
Brown-street & Back	1	...	...	...	...	...	...	...	1
Bryce-street	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burlington-street	...	3	...	3	...	...	...	...	...	4	...	4	...	...	...	...	...	...
Burnaby-street	1	...	...	...	...	...	...	1	...
Burnden & Back	3	...	3	...	...	...	...	...	...
Burns-street	1	...	...	...	...	...	...	1	...
Burton-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bury New-road	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Bury Old-road	...	6	2	...	1	2	...	1	...	5	...	1	...	...	...	...	4	...
Buxton-street	1	...	1	...	...	...	...	...	...
Cable-street	...	1	...	...	1	...	...	...	...	2	...	...	...	...	...	...	2	...
Caledonia-street	1	...	...	...	...	...	...	1	...
Cambridge-street	1	...	1	...	...	...	...	...	...
Canning-street	2	...	...	...	...	...	...	...	2
Cannon-street & Back	...	6	3	...	1	...	...	2	...	7	...	...	...	...	...	...	7	...
Cardwell-street	1	...	1	...	...	...	...	...	...

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Carey-street and Back	2				1	1												
Castle-street										5							5	
Cecil-street ...										1							1	
Cedar-street	1				1													
Cellini-street...	1				1					4							4	
Central-street	2		1						1	1								1
Centre-street...	1				1					4			1				3	
Chalfont-street										1							1	
Channing-street	1				1													
Chapel-street...	4		3		1					1							1	
Chapel-street, Haulgh										1			1					
Charles-street & Back	2				2													
Charles Rupert-street	2				2					3			2				1	
Chatham-street										1			1					
Chester-street	1		1															
Chorley New-road	1				1													
Chorley Old-road	2		1					1		3			1				2	
Chorley-street & Back	1		1							1							1	
Church-avenue	1				1													
Church-street										2							2	
Churchgate	1				1					1							1	
Clarence-street	1					1				3	1						2	
Clarendon-street	2		1		1					3			2				1	
Clegg's Buildings	1				1													
Clifford-court										1			1					
Clifford-street										6							6	
Cloister-street										1							1	
Clyde-street	2			2						1			1					
Coe-street and Back	1			1						14			7				7	
Colwyn-grove	1		1															
Conrad-street										1			1					
Coop's-court ...	2		2															
Cooper-street...	1				1					2			2					
Cooper's square	1		1															
Cotton-street...	1				1					1							1	
Craddock-street										2			1				1	
Cream-street	1								1	1								1
Cricket-street										1			1					
Croasdale-street	2		1	1						4			4					
Crook-street	1				1					3							3	
Cross-street and Back	1				1													
Cross Ormrod-street...	1				1													
Crown-street	1		1															
Crowther-street	1				1					1			1					
Crumpsall-street	1		1							4			1				3	

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Darbishire-street	...									4								4
Darley-street	...	1		1						3								3
Davenport-street	...	1				1												
Dawes-street and Back	...	1				1				2			2					
Deane Church-lane	...	1					1			1			1					
Deane-road and Back	...	1				1				3			2				1	
Deansgate	...	1				1				1			1					
Defence-street	...									3			3					
Delph-street	...									1							1	
Derby-court	...	1				1												
Derby-street and Back	...	4		2		1	1			16			2				14	
Devonshire-street	...	1					1			2							2	
Dorset-street	...									3			1				2	
Dover-street	...									2							2	
Dowson-street	...	1			1					2			1				1	
Duncan-street	...	2					2											
Durham-street	...	1				1				4							4	
Ebenezer-street	...									1			1					
Eckersley-street	...	1				1												
Eden-street	...									2			2					
Edmund-street	...	1				1				1			1					
Edward-street	...	1				1				1			1					
Egyptian-street	...									1			1					
Egerton-street	...	2				1	1			3			1				2	
Ellesmere-street	...									2							2	
Elmwood-grove	...									1							1	
Elton-street	...	1					1											
Emblem-street & Back	...	1		1														
Emmanuel-street	...									2							2	
Eskrick-street	...									1							1	
Exchange-street	...	1			1					1			1					
Fairfield-street	...									1							1	
Falcon-street	...	1			1					2			2					
Farmer-street	...	2				2												
Ferguson-street	...									1			1					
Finney-street	...									1			1					
Fitton Houses	...									1							1	
Fleet-street	...	2		1		1												
Fletcher-street & Back	...	3					1	1	1	8							7	1
Flitcroft-street	...	1			1					1							1	
Folds-road	...	1				1				9			4				5	

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Forge-street	1	...	...	...	...	...	...	1	...
Foundry-court	1	...	...	...	...	...	...	1	...
Foundry-street & Back	4	...	2	...	...	2	...	...	...	7	...	...	3	...	...	...	4	...
Frank-street...	3	3	...	...	...	...	...	...	...
Franklin-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Fraser-street...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Gas-street	1	...	...	...	...	...	...	1	...
Gate-street	1	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...
George-street	...	2	...	1	...	1	...	...	...	2	...	...	1	...	...	...	1	...
George Arthur-street	1	...	...	...	...	...	...	...	1
Gibbon-street	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...
Gibraltar-street	...	1	...	...	...	1	...	...	...	6	...	...	...	...	...	...	6	...
Gilbert-street	...	1	...	...	...	1	...	...	...	2	...	...	2	...	...	...	...	...
Gilnow-grove	...	2	...	1	1	...	...	...	...	2	...	...	2	...	...	...	...	...
Gilnow-lane & Back...	2	...	...	...	...	1	...	...	1	3	...	...	...	...	...	...	2	1
Gilnow-road	1	...	...	...	...	...	...	1	...
Gleave-street...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glen-Bott-street	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Glenthorne-street	1	...	...	...	...	...	...	1	...
Goldsmith-street	1	...	...	1	...	...	...	...	...
Goodwin-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Grafton-street	...	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1
Grasmere-street	...	3	...	...	...	3	...	...	...	2	...	...	...	...	...	...	2	...
Great Moor-street	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grecian-crescent	1	...	...	...	...	...	...	1	...
Grecian-street	...	5	...	3	...	2	...	...	...	1	...	...	...	...	...	...	1	...
Green's-court	...	1	...	...	1	...	...	...	...	2	...	...	1	...	...	...	...	1
Green-street	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenhalgh-street	1	...	...	1	...	...	...	...	...
Grosvenour-street	1	...	...	...	...	...	...	...	1
Grundy-court	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...
Haigh-street...	...	1	...	...	1	...	...	...	...	3	...	...	2	...	...	...	1	...
Halliwell-road	...	6	...	1	1	3	...	...	1	4	...	...	2	...	...	...	2	...
Halstead-street	...	2	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	1
Hammond-street	2	...	...	2	...	...	...	...	...
Hampden-street	...	1	...	...	...	1	...	...	...	4	...	...	...	...	...	...	4	...
Hanover-street	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hardy-street	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Hargreave's-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Harris-street...	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...
Harold-street...	2	...	...	1	...	...	...	1	...
Harwood-street	2	...	...	2	...	...	...	...	...
Haydock-street	...	1	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Heap-street ...										3							3	
Hebden-street										1							1	
Hector-street	2				1	1												
Hennon-street										1							1	
Hensor-street										2			2					
Herschell-street										1							1	
Hewitt-street	1				1													
Hibbert-street										2							2	
High-street and Back	1					1				4							4	
Higher Bridge-street..	2		1	1						2			1				1	
Higher Darcy-street...										1							1	
Hill-street ...	1				1					1			1					
Hobart-street										1							1	
Hobson-street & Back	2				2													
Holden-street	3		2			1				4			2				2	
Holt-street ...										1							1	
Homer-street	1				1					4							4	
Hope-street ...	1				1					3							3	
Hopkins-street										2			2					
Horace-street										1							1	
Houghton-street	1				1					1								1
Howard-street										1			1					
Howcroft-street	1				1													
Howel-croft ...	1					1				1							1	
Huddart-street	2				2													
Hulme-street	4		1		3					2			1				1	
Independent-street ...	1					1												
Infirmery ...	3			1					2	4			1				1	2
Irving-street ...	1		1							2							2	
Isabel-street ...	1							1		4							4	
James-street & Back...										1			1					
Jauncey-street										3							3	
Jenny Beck-street	1		1															
John-street ...	3		1		1			1		4							3	1
John Brown-street	2		1		1					2							2	
John Taylor-street	2				1			1		2							2	
Joseph Lee-street	1				1													
Jubilee-street	1				1													
Kay-street ...	1			1						4			4					
Kent-street ...										2							2	
Kenyon-street	1				1													
Kestor-street	3				2	1				2			1				1	

STREET		DEATHS								DISEASES NOTIFIED									
		Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Keswick-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
King-street and Back	3	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Kirk-street and Back	3	...	1	...	...	1	...	1	...	4	...	...	...	...	...	...	...	4	...
Kynaston-yard	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Lancaster-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Lark-street and Back	1	...	...	...	...	...	...	...	1	4	...	...	...	...	...	...	3	1	...
Lawn-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Leach-street	...	1	...	...	...	1	...	...	...	2	...	...	...	...	...	...	2	...	...
Leaf-street	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Lee-street	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	3	...	...
Leicester-street	...	4	...	...	...	4	...	...	...	3	...	...	...	...	...	...	3	...	...
Lena-street	...	1	1	...	...	...	...	...	...	7	4	...	1	...	...	...	1	1	...
Lever-grove	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Lever-street	...	6	...	1	...	3	...	2	...	8	...	...	1	...	...	...	7	...	...
Liptrot-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Livesey-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Livingstone-street	...	3	...	...	...	3	...	...	...	3	...	...	...	...	...	...	3	...	...
Lomax-buildings	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
Lomax-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Lum-street	...	1	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...
Lumsden-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Lupton-street & Back	2	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	1	...	...
Lyon-street	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...
Manchester-road	...	1	...	...	1	...	...	...	...	3	...	...	1	...	...	...	1	1	...
Maria-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Marsden-street	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Mary-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Mason-street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Matthew-street	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Mayor-street & Back	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
McHale's-court	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Merehall-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Merrick-street	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
Mid-street	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	5	...	...
Mill Hill-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Milo-street	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Minorca-street	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mona-street	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moncrieffe-st. & Back	2	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mooney-street	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moor-lane	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...
Moore-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Morley-street	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...

STREET	DEATHS									DISEASES NOTIFIED								
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Morris-street...	1		1							1								
Mort-street ...	1							1		2							2	
Mortfield-street	1				1					2			2					
Mount-street										2			2					
Myrrh-street ...	1					1				1			1					
Myrtle-street										2							2	
Nebo-street ...										1							1	
Nelson-street	3					3				4			4					
Newport-street & Back										3			2				1	
Ninehouse-lane	2		1		1													
Noble-street ...	1							1		7			2				5	
Norfolk-street	2		1			1				3			1				2	
Norman-street	1							1		2							2	
Norwood-grove										1			1					
Nuttall-street	3			1	2					7			1				6	
Oak-street ...	4		1		3													
Oldhall-street	1		1															
Oldham-street										1			1					
Oliver-row ...	1				1													
Orlando-street										1			1					
Ormrod-street	1				1					1							1	
Orphanage ...										1							1	
Oxford-grove...	1		1							1			1					
Palace-street...										1			1					
Palmerston-street	1				1					1							1	
Park-road ...										2			1				1	
Park-street ...	1							1		3							3	
Parkfield ...	1				1					1							1	
Parkinson-street										1								1
Parliament-street										1							1	
Parrott-street										4			1				3	
Partridge-street	2		1		1					1			1					
Peabody-street										1							1	
Peel-street ...	1				1					4							4	
Pen-street ...	1							1		4	1		1				2	
Percy-street ...	1				1					1							1	
Peter-street...	1				1													
Phillip-street...	2		1						1	3							2	1
Phoenix-st. & square...										2							2	

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Pickering-street ...	2				2					1			1					
Pilkington-street ...										1			1					
Pitt-street ...	1				1					1							1	
Platt-street ...										1								1
Pleasant-street ...	1			1						1			1					
Pool-street and Back	1				1													
Poplar-street ...	2		1		1													
Portugal-street ...	1					1												
Powell-street ...	1								1	1							1	
Prince-street...	1				1													
Princess-street ...	1				1					1							1	
Profit-street ...	1				1					2							2	
Prosperous-street ...	1				1					6			1				5	
Queen-street ...	2				2													
Raby-street ...										1							1	
Radcliffe-road ...	1		1							2			1				1	
Raglan-street...										1							1	
Ralph-street ...	2			2						3			3					
Ramwell-street ...										9							9	
Randal-street ...	2					2												
Range-street...										1			1					
Rawsthorne-street ...	1				1													
Reservoir-st. & Back...	3		1		2					2							2	
Rhyl-street ...										1							1	
Richmond-place ...	2				2													
Richmond-terrace ...	1				1													
Rigby-street ...	3		2	1						1			1					
Riley-court ...	2				2													
Rishton-lane ...	2		1		1					6			1				5	
Rivington-street ...										2							1	1
Rix-street ...	2		1		1													
Robert Stanley-street	2				1				1	9							8	1
Rosamond-street ...										1			1					
Rose Hill ...										1							1	
Rose-street ...										2							2	
Rothwell-street & Back	2		1		1													
Roundcroft-street ...	3				2	1												
Roxalina-street ...	1		1															
Rumworth-street ...	1								1	2							1	1
Rushey Fold-lane ...	2			2						2			2					
Rutter-street ...	1		1															
Ryley-street ...	1				1					1			1					

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea.	Whooping Cough	English Cholera	scarlatina	Diphtheria
St. George's-rd. & Bk.	2		1		1					4			2				2	
St. Helens-road ...	1			1						3			2				1	
St. John's-st. & Back	1			1						1			1					
Salisbury-street ...										1							1	
Saturn-street...	1					1												
Saw-street...	2			1	1					2			2					
School-court ...	1				1													
School Hill ...	1			1						4			2				2	
Seddon-street ...	1					1												
Shaw-street ...	4		3			1				5							5	
Sheridan-street ...	2			1		1				5							5	
Shurmer-street ...										2							2	
Shuttle-street ...	2			1	1					1			1					
Sidney-street & Back	2		2							3			1				2	
Silverwell-street ...	1			1						2			1				1	
Simpson-street ...	1				1					2			2					
Slater-street ...										1			1					
Slaterfield ...	1				1					1							1	
Smith-street ...	1				1					1							1	
Snipe-street ...	1					1												
Snowden-street ...	2		1		1					6							6	
Soho-street ...	1				1					2							2	
Southern-street ...	2		2															
Speakman-street ...										1							1	
Spring-gardens & Back	4		1		3					3			3					
Spring-passage ...	1		1															
Springfield ...	1		1															
Stable-row ...	1					1												
Stainsbury-street ...	1		1															
Stamford-street ...	1				1					2							2	
Stanley-court ...										2			2					
Stanley-street ...	1				1													
Stanton's-court ...	1			1						1			1					
Sterrat-street ...										1			1					
Stott-court ...	1					1												
Sunninghill-street ...										3							3	
Sutcliffe-street ...										1							1	
Swan-lane ...	1					1												
Swan-street ...	1					1												
Sylvester-street ...										1							1	
Taylor's-yard...	2			1		1				1			1					
Thomas street ...										1			1					
Thomas Rostron-street										1							1	

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Threlfall's-court	1	...	...	1	...	...	...	...	...
Thwaites street	2	...	...	...	...	...	...	2	...
Todd-street	8	...	...	2	...	...	...	6	...
Tong-street	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Topping-street	...	1	...	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...
Tower-street	1	...	...	...	...	...	...	1	...
Trafalgar-street	...	1	...	...	1	...	...	...	...	3	...	...	3	...	...	...	...	...
Turk-street	1	...	...	...	...	...	...	1	...
Furton-street & Back	4	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Tyldesley-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Tyndall-street	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Union Buildings	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Union-street	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Uttley-street	2	1	...	1	...	...	...	...	2	1	...	...	...	...	...	1	...
Venice-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Venture-street	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...
Vermont-street	...	1	1	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...
Victor-street	1	...	...	1	...	...	...	...	6	...	...	...	...	...	...	6	...
Victoria-grove	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...
Victoria-street	...	1	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...
View-street	3	...	...	...	...	...	...	3	...
Villiers-street	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vincent-street	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Virgil-street...	...	1	...	...	1	...	...	...	...	4	...	...	...	...	...	...	4	...
Wagner-street	2	...	...	2	...	...	...	...	...
Waldeck-street	...	3	1	1	1	...	...	...	...	1	...	...	1	...	...	...	...	...
Wallace-street	5	...	...	2	...	...	...	3	...
Walworth-street	1	...	...	...	...	...	...	1	...
Walter-street...	...	2	...	...	2	...	...	...	...	1	...	...	...	...	...	...	1	...
Ward-street	1	...	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...
Waterloo-street	...	4	2	2	...	...	...	...	...	15	...	...	13	...	...	...	2	...
Weber-street	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Well-street	1	...	...	...	...	...	...	1	...
Wellington Buildings	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington-street	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wentworth-street	1	...	...	...	...	...	...	1	...
Westbrook-street	3	...	...	...	...	...	...	3	...
Westbury-street	3	...	...	3	...	...	...	...	...
Weston-street & Back	2	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...

STREET	DEATHS								DISEASES NOTIFIED									
	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria	Total	Small-pox	Measles	Fever	Diarrhoea	Whooping Cough	English Cholera	Scarlatina	Diphtheria
Whittaker-street ...	1	1																
Whowell-Fold ...	1					1												
Wigan-road ...										1			1					
Willows-lane ..	3	1						2		2							2	
Winder-street ...										1							1	
Windley-street ...	3			1		2				3			1				2	
Wolfenden-street ...										6			1				5	
Worcester-street ...	2				1	1				1			1					
Workhouse ...	5		3	2														
Worsel-street...	1			1						1			1					
Wylde-street and Back	1				1					3							3	
Wynne-street ...	1				1					2			1				1	
York-street and Back	2				2					5							5	

BOLTON

Rural District Council.

ANNUAL REPORT

BY

JAMES BARR, L.R.C.P., L.R.C.S., D.P.H.,
Medical Officer of Health.

1895.

Bolton :

THE DAILY CHRONICLE STEAM-PRINTING WORKS, KNOWSLEY STREET.

1896.

THE
Rural District Council

ANNUAL REPORT

FOR THE YEAR 1900-1901
AND THE PROGRESS OF THE DISTRICT

1901

Printed and Published by
THE DISTRICT COUNCIL, RURAL DISTRICT

Medical Officer's Report.

Estimated Population to middle of 1895, 34,927. Census, 1891, 31,665.

Area of District in Acres, 25,026.

276, DEANE ROAD, BOLTON, JANUARY 26TH, 1896.

To the Bolton Rural District Council.

GENTLEMEN,

It is again my duty to present to you my Annual Report on the health and mortality of your District, with a record of the sanitary work done during the year.

Registration of Births.—During the year 1044 births were registered in the district; 529 were those of males, and 515 those of females, being at the rate of 29·8 per 1000 persons living per annum. The birth rate for 1894 was 30·6.

Illegitimate Births.—The number of children born out of wedlock was 15, or 1·4 per cent. of the total births.

Death Rate.—The number of deaths from all causes, and at all ages, was 523, of which 249 were males, and 274 females. This mortality gives a death rate of 14·9 per 1000 per annum upon an estimated population of 34,927, the rates for 1894 and 1893 being 12·6 and 17·5 per 1000 respectively.

Infant Mortality.—The mortality among infants, measured by the proportion of deaths under one year of age, to births registered, averaged 150 per 1000.

Zymotic Diseases.—The number of deaths from these diseases was 42, including five from Scarlet Fever, Diphtheria 6, Croup 5, Enteric Fever 6, Measles 4, and Whooping Cough 16.

The death rate from these diseases amounted to 8·0 per cent. of total deaths from all causes, and was equal to a rate of 1·2 per 1000 of the population. A reference to Form 3, appended hereto, will show death rate from Zymotic Disease in all townships for last five years.

Small Pox.—A case of Small Pox was reported to me on the 29th of July from Darcy Lever (a woman aged 28 years), and was removed the same day to your hospital at Deane. It was of a very mild type. The patient had good vaccination marks, but had not been re-vaccinated. I could not trace the origin of the attack, but owing to the measures taken no further outbreak occurred. All other townships in the district have been free from this disease.

Scarlet Fever.—The total number of cases notified was 74, five of which died. Eight townships, viz., Belmont, Edgworth, Entwisle, Harwood, Middle Hulton, Over Hulton, Longworth, and Quarlton were entirely free from this malady. Most cases were reported during the last quarter of the year, Tong and Great Lever being the most populous townships contributed 48 of the whole number.

Thirty-two of these cases were removed to hospital. Particulars as to numbers removed from each township will be found in Table "B."

There is a marked diminution in the number of cases reported, compared with 1894, when 160 cases were reported, and 85 removed to hospital.

Diphtheria.—The number of cases reported was 29, six of which ended fatally. The township of Edgworth suffered considerably during the months of January and February from this disease, 14 cases being reported, and increasing to 19 for the year. The first notification was received on the 8th of January, from the house No. 1, Greengate, and up to the 7th day of February four cases had occurred at the same house, and three deaths taken place. At the time of the outbreak the wall of this cottage formed one side of the closet, and the foundations of the house became sewage sodden. In what manner Diphtheria was introduced into this house it is difficult to state, but the conditions found there encouraged its growth and spread. Two of the children attended the public school at Edgworth, and by this means, as well as the Christmas gatherings and attending Sunday school, by the 11th of February six houses had become infected, and 14 persons ill. A noticeable fact in the outbreak was that where the disease spread to other inmates of the same house sanitary defects were found, and where the sanitary arrangements were good no spread took place. The milk and water supply were both particularly enquired into but were found good. There is no system of main

drainage at Edgworth, and the sewage does not get away from the houses as it should, but in most cases is taken by rubble drains into the fields or ditch. A many of the ashpits are badly built, and foul, allowing fluid to run into the back street. So long as matters remain as they are I am afraid you must expect these cases of Diphtheria cropping up.

Diarrhoea.—Twenty-eight deaths occurred from this cause and were all with one exception in children under five years of age. The extreme heat during August and September had, I think, much to do with it, as 25 fatal cases were reported during those months.

Enteric Fever.—The number of cases notified was 44, and in six persons proved fatal. An outbreak of this disease occurred in October last at Tomlin Fold, Tonge. Four persons were ill at the same time but none proved fatal. The house is a very old one, damp, and generally insanitary. I attribute this outbreak to the foul smell arising from decayed vegetables placed in the back premises by the occupier, who is a green-grocer. Two patients were removed to hospital and steps taken to have the house closed. Two other cases at Smithills appeared to be due to the foul exhalations from sewer grids opposite their houses. I suggested extra ventilation by a shaft carried up the side of an adjoining building, and no complaints have since been made.

Most of the cases were distributed sparsely over the district. The milk supply was very varied and played no part in the outbreaks. In all cases of Enteric Fever the milk supply is enquired into carefully, and in all the cases the water supply was obtained from the Bolton Corporation mains. The privy midden system in populous townships like Great Lever and Tonge are very objectionable, and all new houses should have closets built on the waste water system.

Measles and Whooping Cough.—Both these complaints existed in some degree, and proved together fatal to 20 children, showing there is some merit in classing them as dangerous infectious diseases.

Diseases of Chest.—The total number of deaths from these causes was 161, being 16 more than the mortality from these diseases during 1894, and include 105 from Bronchitis, Pleurisy, and Pneumonia, 26 from Heart Disease, and 30 from Pulmonary Phthisis.

Notification of Infectious Diseases.—The following table shows the number of cases reported by Medical Men practising in the Rural District, and the number of deaths resulting :—

QUARTERS.	INFECTIOUS CASES.						Total Number of Infectious Cases.
	Small Pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Erysipelas.	
First Quarter	0	6	22	8	0	2	38
Second Quarter	0	12	2	4	0	2	20
Third Quarter	1	13	0	13	1	4	32
Fourth Quarter	0	43	5	19	0	2	69
For Year.....	1	74	29	44	1	10	159
Deaths	0	5	6	6	1	0	18

The total number of cases being 73 less than for 1894.

The Infectious Hospital.—The number of patients removed to hospital for isolation was 41, being less by 47 as compared with 1894. Table below gives particulars as to diseases admitted, as well as ages and number of deaths :—

AGE—YEARS.	ALL CAUSES.		SMALLPOX.		SCARLET FEVER.		ENTERIC FEVER.		DIPH- THERIA.	
	Patients Admitted.	Deaths.	Patients Admitted.	Deaths.	Patients Admitted.	Deaths.	Patients Admitted.	Deaths.	Patients Admitted.	Deaths.
Over 2 and under 5	5	2	—	—	5	—	—	—	—	—
„ 5 „ 10	17	—	—	—	15	—	—	—	1	—
„ 10 „ 15	13	—	—	—	8	—	3	—	2	—
„ 15 „ 30	5	—	1	—	3	—	2	—	—	—
„ 30 „ 40	1	—	—	—	—	—	1	—	—	—
Total	41	2	1	—	31	—	6	—	3	—

The average stay of patients at the Hospital was for Scarlet Fever 42 days, Enteric Fever 49 days, Diphtheria 28 days, and the case of Smallpox 56 days. The Hospital was closed for six weeks during April and May.

Disinfection.—Fifty-six houses have been disinfected after the recovery or removal of infectious disease, and the steam disinfecter at the Hospital has been in requisition as usual for the disinfection of bedding, wearing apparel, carpets, &c.

Visits.—In conformity with the Local Government Board's Order regular inspections are made of the district, and after such visits I have recommended the closing of a number of houses as unfit for habitation, viz.:—14 houses at Darcy Lever, six houses at Ellis Fold, Tonge, five houses at Lostock, two houses at Smithills, nine houses at Deane. Most of these are still receiving the attention of your Council.

Prosecutions.—I was called in one case only during the year to give evidence before the Magistrates in the matter between yourselves and Lord Bradford, to supply Bolton Corporation water to houses in Great Lever, instead of water supplied by his Lordship from the Holme reservoir, which from its polluted condition was not fit for domestic purposes. An order was made to put in the Corporation supply.

Dairies and Cowsheds.—I have visited a number of farms in the district during the year, and paid particular attention to ventilation and cubic space, also as to the storage of the milk and cleaning of utensils. The custom of stuffing the air holes in shippens with hay, to raise the temperature of the place, with the supposed idea of encouraging the increased supply of milk, is still in practice at a few places, but which only tends to encourage tuberculosis in the cattle. The practice of slaughtering cattle at farms appears to me most objectionable, because there is no inspection, and there is a great risk of diseased meat finding its way to the public, besides the floor of the outhouse or barn where the killing is usually conducted is soft, which allows soakage, and tends to become a nuisance.

The Removal of Refuse.—The usual system of contract has been followed during the year for the emptying of ashpits in Great Lever, Darcy Lever, Tonge, Brightmet, Middle Hulton, Over Hulton, Deane, Heaton, Lostock, and Smithills, and gives satisfaction.

Reviewing the work of the year I may state that considerable progress has been made in carrying out useful sanitary work, such as the laying of sewers in Deane, Captain's Clough, Smithills, and other places.

Appended are the reports of the Sanitary Inspectors.

I am, Gentlemen,

Your obedient Servant,

Medical Officer of Health.

SEWERS LAID AND STREETS PAVED IN THE DISTRICT
DURING THE YEAR.

		Lin. Yds.	Total Yds.
Smithills	Captain's Clough Sewer	703	1467
	Vallets Lane & Church Rd. Sewer.	764	
Great Lever	Holden Street	175	433
	Rishton Lane.....	133	
	Halliwell Street.....	125	
Tonge.....	Cemetery Road	165	512
	Back Barton Street	195	
	Back Scowcroft Street	152	
Deane	Wigan Road	190	349
	Back Wigan Road South.....	159	
Heaton	Back Markland Hill Lane.....	118	118
			2879

Township.	Plans approved for Houses.	Length of Sewers laid. Linl. Yards.	Length of Streets Paved. Linl. Yards.	
			12 Yards.	6 Yards.
Brightmet	2	—	—	—
Great Lever	176	433	160	—
Heaton	12	118	—	—
Smithills.....	35	1467	—	—
Middle Hulton	21	—	—	—
Over Hulton	33	—	—	—
Deane	—	349	—	179
Tonge.....	119	512	—	—
Lostock	1	—	—	—
	399	2879	160	179

(A)

LOCAL GOVERNMENT RETURN.

Table of Deaths during the Year 1895, in the Bolton Rural District, classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics.	Mortality from all causes at subjoined Ages.							Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.																						
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	FEVERS.																						
								Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneu- monia, & Pleurisy.	Heart Disease.	Influenza.	Injuries.	All Other Diseases.	Total.	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Belmont	7	2	0	0	1	3	1	Under 5 upwards																						2
Bradshaw	12	2	1	1	0	5	3	Under 5 upwards	1															3					1	5
Brightmet	23	5	5	1	2	8	8	Under 5 upwards													3			3	1		1		6	10
Deane	33	12	2	2	2	6	9	Under 5 upwards	1											1			3	2					11	14
Edgworth	23	7	3	5	1	7	6	Under 5 upwards		1	2												2	4		2		1	6	19
Entwisle	2	0	1	0	0	1	0	Under 5 upwards		1													2	6	1		1		3	19
Harwood	25	7	2	0	0	5	11	Under 5 upwards		1														1					1	1
Heaton	17	8	3	1	1	2	2	Under 5 upwards			1									2				3	7	2	1		5	9
Middle Hulton	50	18	6	1	1	8	16	Under 5 upwards												3	1				3	6	3		17	24
Over Hulton	27	8	6	0	1	5	7	Under 5 upwards			1									1	3				3	3	1	1	5	14
Darcy Lever	33	8	5	1	1	9	14	Under 5 upwards	1							1			2		1			6	1		3	13	25	
Great Lever	97	43	5	5	4	27	13	Under 5 upwards												2	10			2	4	11	2	3	30	48
Longworth	1	0	0	0	1	0	0	Under 5 upwards																					28	49
Lostock	10	4	2	0	0	3	1	Under 5 upwards													1							1	5	6
Quarltown	1	0	1	0	0	0	0	Under 5 upwards	1																				1	1
Smithills	47	6	8	2	6	15	10	Under 5 upwards											1	2	1								9	14
Tonge	93	37	17	4	5	18	17	Under 5 upwards	3										1	3	8				9	5	1		30	54
TOTALS	523	167	67	23	26	122	118	Under 5 upwards	4	1	5		6			1			4	16	27	1			39	1	18		136	234

Four persons died at the Bolton Infirmary, and are accounted for in their Townships, also nine persons died at the Workhouse, who are also accounted for.

Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health, during the year 1895, in the Bolton Rural District, classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics.	Population at all Ages		Estimated to middle of 1896. (c.)	Registered Births. (d.)	Aged under 5 or over 5. (e.)	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													No. of such Cases removed from their Homes in the several Localities for Treatment in Isolation Hospital.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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						Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	1	2	3	4	5	6	7	8	9	10	11	12	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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State here whether "Notification of Infectious Disease" is compulsory in the District. Yes. Since when? 4th of December, 1883. Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the District, and fill the columns accordingly. State here the name of the Isolation Hospital used by the sick of the District. Mark (H) the Locality in which such Hospital is situated; and if not within the District, state where it is situated. Rural District of Bolton Infectious Hospital, situated at Deane.

FIVE YEARS' MORTALITY STATISTICS.

FORM III.

TOWNSHIP.	ANNUAL RATE PER 1000 LIVING.									
	1891.		1892.		1893.		1894.		1895.	
	Death Rate.	Zymotic Death Rate.	Death Rate.	Zymotic Death Rate.	Death Rate.	Zymotic Death Rate.	Death Rate.	Zymotic Death Rate.	Death Rate.	Zymotic Death Rate.
Edgworth	17.1	0	12.3	1.07	14.4	1.07	11.2	1.0	15.5	3.2
Bradshaw	15.4	0	12.1	0	9.2	0	12.2	0	17.9	1.4
Brightmet.....	12.2	0	18.3	2.3	11.3	1.1	9.4	0.5	16.0	0
Entwisle	10.4	0	6.8	0	24.2	0	20.6	6.8	6.8	3.4
Harwood.....	23.0	1.2	14.4	0	20.2	2.5	10.6	0	15.5	0
Heaton	16.2	1.2	11.1	1.2	11.0	0.6	8.4	0	10.2	0.6
Middle Hulton ...	20.3	0.70	16.1	0	20.4	1.4	13.7	0	16.7	0
Over Hulton.....	15.0	2.6	16.2	0.6	28.0	1.2	12.4	1.1	15.2	1.1
Darcy Lever	25.7	1.5	18.6	1.01	17.9	1.4	20.6	0.5	18.7	3.4
Great Lever	18.1	0.9	16.5	1.6	18.1	4.1	13.0	1.3	15.8	0.16 - 0.16
Longworth	9.8	0	19.4	0	0	0	9.5	0	9.4	0
Lostock	14.6	1.1	13.2	2.2	17.7	1.1	14.9	0	10.6	0
Quarltun.....	15.9	0	15.8	0	19.8	0	27.5	3.9	30.9	3.9
Deane ..	15.1	1.7	18.0	1.7	15.2	3.9	11.8	0.4	13.9	0.4
Belmont	9.4	1.3	5.2	0	22.1	1.3	13.8	2.5	8.7	0
Tonge	17.2	2.0	13.3	0.8	18.8	2.8	12.2	1.0	14.7	1.5
Smithills.....	10.6	1.4	14.2	1.4	13.9	2.08	10.4	1.9	15.4	0

TO THE BOLTON RURAL DISTRICT COUNCIL.

REPORT OF INSPECTOR OF NUISANCES FOR THE YEAR
ENDED 31ST DECEMBER, 1895.

SOUTHERN DISTRICT.

Total Number of Nuisances Reported during the Year	193
Defective Drains, &c., repaired	68
Defective Privies and Ashpits, repaired or rebuilt.....	48
Houses and Premises so damp as to be a nuisance.....	24
Animals so kept as to be a nuisance	6
Accumulations of Refuse removed	8
Houses Overcrowded	0
Water Pollution	1
Chimneys sending forth Black Smoke in such quantity as to be a nuisance.....	0
Total Number of Nuisances Abated during the year	155
Visits Made and Disinfectants Supplied in Cases of Infectious Disease Reported by Medical Officer	53
Houses Disinfected after Infectious Disease	17
Dairies, Cowsheds, and Milkshops visited.....	67
Number of Smoke Observations.....	6
Samples of Water taken for Analysis.....	12
Number of Ashpits Emptied after Notification by Inspector	740

The Slaughter-houses in the district have been periodically inspected and the carcase of one animal destroyed as unfit for Human Food.

Corporation Water has been laid to a considerable number of Cottages and Farms during the year.

Yours obediently,

THOMAS SKIDMORE, Inspector.

23rd January, 1896.

BOLTON RURAL DISTRICT COUNCIL.

 REPORT OF INSPECTOR OF NUISANCES FOR THE YEAR
 ENDED 31ST DECEMBER, 1895.

 NORTHERN DISTRICT.

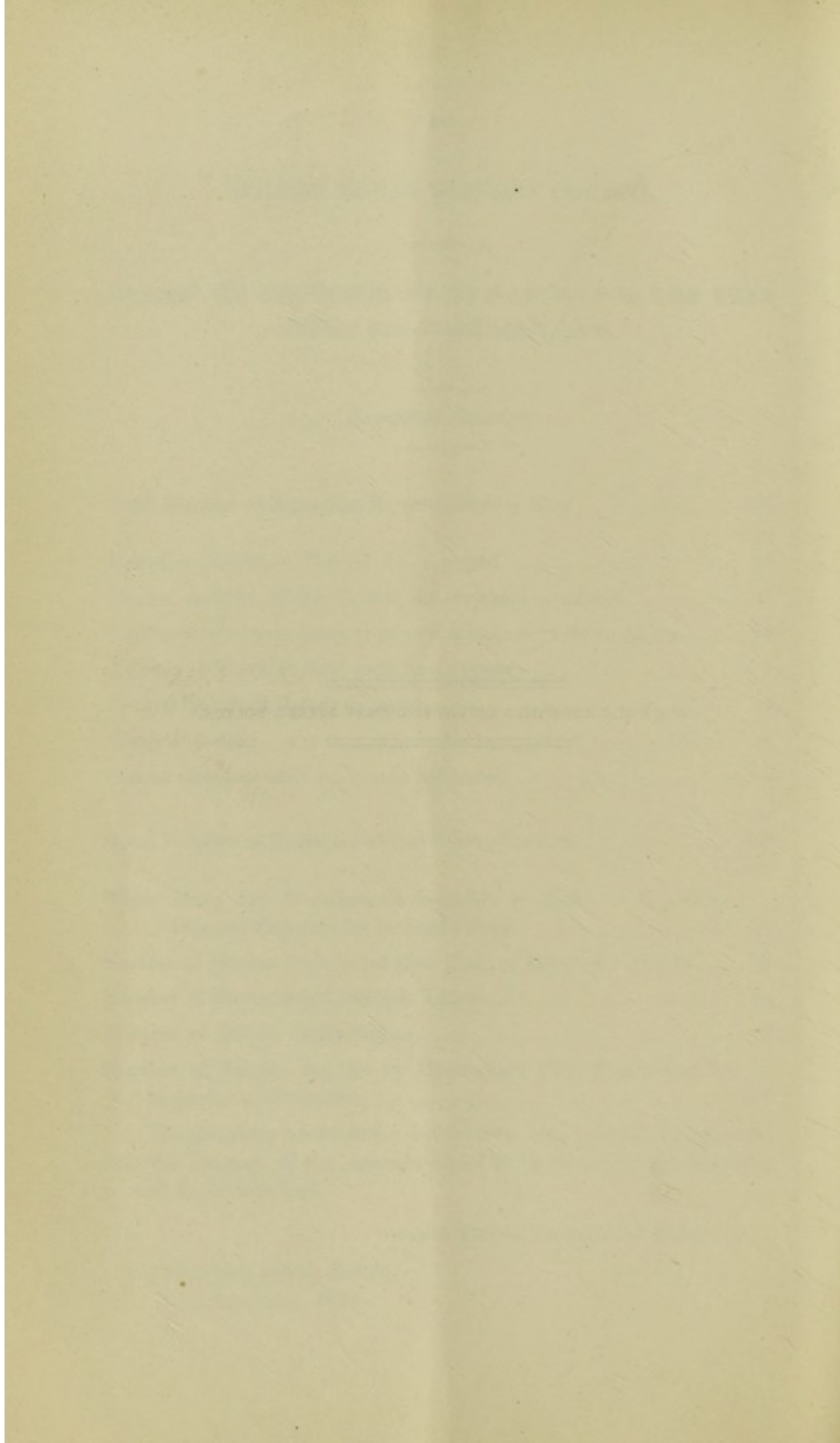
Total Number of Nuisances Reported during Year	163
Defective Sinkpipes, Drains, &c., repaired	61
Privies, Ashpits, Water Closets, &c., repaired or rebuilt.....	48
Houses or Premises damp or in such a state as to be a nuisance.....	28
Animals or Fowls so kept as to be a nuisance	7
Accumulations of Refuse removed	5
Water Pollution	2
Houses closed as unfit for human habitation	2
Total Number of Nuisances abated during the year.....	153
Visits Made and Disinfectants Supplied in Cases of Infectious Diseases Reported by Medical Officer	60
Number of Houses Disinfected after Cases of Infectious Disease ...	36
Number of Dairies and Cowsheds Visited	74
Number of Smoke Observations	7
Number of Ashpits emptied by Contractors after Notification by Inspector of Nuisances.....	284

The slaughter-houses in the district have been periodically inspected and the carcasses of two animals found to be diseased were destroyed as unfit for human food.

JAMES TAYLOR, Inspector of Nuisances.

24, Mawdsley Street, Bolton,
 31st December, 1894.

THE DAILY CHRONICLE OFFICE, KNOWSLEY STREET, BOLTON.



TWENTY-THIRD

ANNUAL REPORT

ON THE

SANITARY CONDITION

OF

BOOTLE,

BY THE

MEDICAL OFFICER OF HEALTH.



BOOTLE:
BOOTLE PRINTING AND PUBLISHING CO., LTD., 107, BALLIOL ROAD.
1896.

TWENTY-THIRD ANNUAL REPORT

ON THE

SANITARY CONDITION OF THE COUNTY

BOROUGH OF BOOTLE.

DURING the year 1895, the Returns of the Local Registrar, Mr. Edwin Smith, record 1823 *Births* and 1075 *Deaths* within the Borough, the natural increase of the population being therefore 748. On comparing these numbers with those in 1894 it will be seen that there was an increase of both births and deaths, viz: -of 163 in the number of births, and of 158 in that of deaths, the natural increase being very nearly the same in the two years.

POPULATION.

Although there is reason to believe that the population of Bootle has considerably increased, still, as it is always of a fluctuating character, and as I have made out all my statistical reports during the year on an estimated population of 51,500, I think it will be advisable to estimate that number as being the average population of Bootle throughout the past year. The following table shows the number of births and deaths within the Borough during the 10 years 1885-1894 (inclusive), and in the year 1895 :—

Years.	Births.	Deaths.	Years.	Births.	Deaths.
1885 ...	1589 ...	807	1890 ..	1706 ...	1017
1886 ...	1737 ...	897	1891 ...	1780 ...	1165
1887 ...	1595 ...	920	1892 ...	1710 ..	951
1888 ...	1681 ...	820	1893 ...	1828 ...	1153
1889 ...	1668 ...	886	1894 ...	1660 ..	917

1895—Births 1823 ; Deaths 1075.

By this table it will be seen that during the last 11 years, the number of births in each year has varied considerably, and I think proves the fluctuating character of the population.

BIRTHS.

The number of births registered in Bootle in 1895 was 1823, of which 944 were males and 879 females. The total number exceeded that in every previous year excepting 1893, in which year 5 more infants were born, the number being 1828. The total number in 1895 was 163 more than that in 1894, and the birth-rate was equal to 35·4 per 1000, and exceeded that of the 33 large towns by 4, and that of England and Wales by 5·1 per 1000.

DEATHS.

The number of deaths registered in Bootle in 1895 was 1075, of which 573 were males and 502 females, so that the deaths of males exceed those of females by 71. The total number was 158 more than in 1894, and the death-rate was equal to 20·87 per 1000. As however 101 paupers, said to belong to Bootle, died in the Walton and Mill Road Workhouses of the West Derby Union, and thus died "outside the district," and 66 deaths of persons not belonging to Bootle occurred "within the district," the difference between these numbers—viz., 35, has to be added to the 1075 deaths before mentioned. The death-rate was, without the addition of 35 equal to 20·87 per thousand, but with this addition 21·55 per 1000, the latter being 3 per 1000 more than in 1894. The death-rate (even with the addition mentioned) was almost the same as that of the average of the 33 large towns, which was 20·7. The death-rate in England and Wales was 18·7 per 1000. Of the 101 paupers belonging to Bootle who died in the workhouses, there were admitted 1 in 1884, 1 in 1886, 1 in 1890, 2 in 1891, 2 in 1892, 10 in 1893, 21 in 1894, and 63 in 1895.

INFANT MORTALITY.

The deaths of infants under 5 years of age within the Borough amounted to 523, and thus comprised 48·6 per cent. of the whole deaths. The total number (523) exceeded that in 1894 by 111, and the percentage by 3·7. The deaths of infants under one year were 335, and were 73 more than in 1894. They were 183·7 per 1000 of the registered births, in other words 18·3 per cent. of those born died within the first year of life, a percentage of 2·6 more than in 1894. The largest number of deaths under 5 years, and also under one year occurred in July, when 100 children under 5 years died, and

of these 75 were infants under one year. By the published returns of infant mortality measured by the proportions of deaths under one year to the registered births, I find that in the 33 large towns the average mortality was 182, and in the whole of England and Wales per 1000.

Analysis of the Causes of Deaths—I will now review the causes of the deaths in Bootle during the past year, and point out the principal reasons why the death-rate in 1895 was larger than in 1894, and also slightly exceeded the death-rate of the 33 large towns. In order to show this clearly, I will first compare the death-rates in Bootle in the 4 quarters of the year with the approximate death-rates of the 33 large towns, and of the whole of England and Wales.

Bootle.			33 Large Towns.			England and Wales.		
1st	Quarter	22·7	1st	Quarter	25·2	1st	Quarter	22·8
2nd	„	17·6	2nd	„	17·8	2nd	„	17·2
3rd	„	23·9	3rd	„	20·2	3rd	„	17·4
4th	„	19·3	4th	„	19·4	4th	„	17·4

On comparing the above death-rates, it will be noticed, that notwithstanding the mortality in Bootle in the 1st Quarter was considerably smaller than in the 33 large towns and the mortality in Bootle in the 2nd and 4th quarters was much the same as that in the 33 large towns, yet the mortality in the 3rd quarter was so much larger than in the 33 large towns that it caused the total mortality to exceed that of the large towns and the whole of England and Wales. It is therefore in this 3rd quarter (as in 1894) that we have to look for the cause of the total mortality being slightly in excess in Bootle, and it will be noticed that the death-rate in this quarter was as much as 23·9, or nearly 24 in the 1000. On looking through table No. 4, it will be seen that this large mortality in the 3rd quarter was due to a large infant mortality, and this was principally caused by the large number of deaths from diarrhœa; the total deaths from this disease alone in the three months, July, August and September, being 88, or 55 more than in the same months in 1894. On comparing the total mortality in Bootle in 1895 with that of the preceding year, it will be found that the deaths from diseases which principally assisted to make the general increased mortality were as follows:—Diarrhœa 107, an increase of no less than 63; diseases of brain, spinal marrow, &c., 97, an increase of 13; diseases of lungs and air passages 276, an increase of 86; premature birth 36, an increase of 16; deaths through violence, &c., 76, an increase of 23.

As a counterbalance to this increased mortality in the above diseases, there was a decrease of deaths from a few diseases, notably 13 deaths from measles, 25 from scarlatina, 12 from enteric fever, 9 from diseases of the stomach, liver, &c. Six of the deaths however from scarlatina and enteric fever were of persons not belonging to Bootle. The deaths in the Bootle Borough Hospital (87) were 3 more than in 1894, but a large proportion of these (49) were non-residents. The deaths in the Hospital for Infectious Diseases at Linacre were 30, and numbered 6 less than in 1894, but 6 of these deaths were from persons in the out-townships. The amount of sickness amongst the pauper class of inhabitants was on the whole less than in 1894, but the decrease occurred in the latter half of the year. The number of cases seen during the year by the District Medical Officer were as follows :—1st quarter 844, 2nd quarter 571, 3rd quarter 543, 4th quarter 230—total 2188. The total No. of cases in 1895 was 221 less than in 1894. Table No. 4 gives a summary of the deaths from the various classes of diseases, the first class being that of zymotic diseases, the prevention, and if possible, the extinction of which, sanitary science is specially directed. I shall now mention the sanitary work accomplished during the year, and in commenting on each of the 7 principal zymotic diseases, I shall in accordance with the order of the Local Government Board, give a summary of the action taken, or which I have advised the sanitary authority to take, to prevent the spread of these diseases.

ZYMOTIC DISEASES.

The number of deaths from the 7 principal zymotics, viz :—smallpox, measles, scarlatina, diphtheria, whooping cough, fevers and diarrhoea (after deducting 7 deaths of persons from outside the district, viz :—2 from scarlatina, 4 from enteric fever, and 1 from diarrhoea, and adding one death from scarlatina in the workhouse) was 184. This number exceeded that in 1894 by 27. Of this number 151 were of children under 5 years of age. The zymotic death-rate was thus equal to 3·57 per 1000, and exceeded that in 1894 by 0·53 per 1000. The total number was 17·7 more than the average of the preceding 10 years. The number of infectious or contagious diseases notified to the sanitary authority during the year was 602, this number not including measles, the notification of which zymotic is not made compulsory by the Local Government Board. The diseases notified were as follows :—Smallpox 37, scarlatina 300, diphtheria 18, enteric (or typhoid) fever 187, simple continued fever 3, membranous

croup 9, puerperal fever 3, erysipelas 45. The total number of notifications were 437 less than those in 1894. The comparison of the approximate death-rates of the 7 principal zymotic death-rates in Bootle, with the death-rates from these diseases in the 33 large towns was as follows :—

					Bootle.		33 Large Towns
Smallpox	...	...	...	..	·038	...	·01
Measles	...	...	...	...	·038	...	·53
Scarlatina	...	...	..	...	·252	...	·18
Diphtheria	...	...	...	...	·233	...	·35
Whooping Cough	...	...	...	...	·504	...	·37
Fevers	..	...	...	...	·446	...	·20
Diarrhœa	...	...	...	...	2·058	...	1·20
Totals					3·569		2·84

On comparing the above death-rates, it will be noticed that the total zymotic death-rate in Bootle considerably exceeded that of the 33 large towns, and that this excess was in a great measure due to the large death-rate from diarrhœa, which was 0·8 more than the diarrhœa death-rate of the 33 large towns. The death-rates from scarlatina, whooping cough and fevers (including typhus and enteric fevers) were also larger, but those from measles and diphtheria were considerably less in Bootle than in the 33 large towns, so that if there had not been such an excess in the diarrhœa death-rate, there would not have been, after all, much difference in the total zymotic deaths of Bootle and the large towns. It will be seen by the Local Government Board's Table B., that of the 602 cases notified, 120 were from Derby Ward, 246 from Knowsley Ward, and 236 from Stanley Ward; therefore the notifications from Knowsley Ward were more than double those from Derby Ward, but were only 10 more than those from Stanley Ward. The number of deaths of persons from these notifiable zymotic diseases that occurred in their homes were as follows :—Derby Ward 8, Knowsley Ward 10, Stanley Ward 16. The number of deaths from these wards in the hospital, were 3 from Derby Ward, 16 from Knowsley Ward, and 5 from Stanley Ward. The total number of deaths of persons from these diseases, both in their homes and in hospital was therefore as follows :—Derby Ward 11, Knowsley Ward 26, and Stanley Ward 21. The number of deaths in the Linacre Hospital from the out-townships was 6 viz :—1 from Litherland, 1 from Waterloo, and 4 from Seaforth.

HOSPITAL FOR INFECTIOUS DISEASES.

The total number of cases treated in the Hospital for Infectious Diseases at Linacre was 360, which number was 46 less than the number treated in 1894. Of the total number 265 were residents and 95 were non-residents. Of the residents admitted and treated in the hospital 53 were from Derby Ward, 123 from Knowsley Ward, and 89 from Stanley Ward. Of the non-residents 56 were from Seaforth, 12 from Waterloo, 18 from Litherland, and 9 from Crosby. There was thus a decrease of 68 cases from Bootle, and an increase of 22 cases from the out-townships. There was a decrease of cases from all the wards in Bootle, viz :—18 from Derby Ward, 23 from Knowsley Ward, and 27 from Stanley Ward. The Local Government Board's Table A, shows that the total number of deaths in the hospital during the year was 30, viz :—24 from persons in Bootle, and 6 from the out-townships, giving a total death-rate of 8·3 per cent. The percentage of deaths from the Bootle cases was a little over 9 per cent., and that from the out-townships a little over 6 per cent. The isolation afforded by this invaluable institution, together with the good nursing, proper dietary and skilful medical treatment provided by the sanitary authority during the year, fully proved the great usefulness of the Hospital, especially in the isolation of the 43 cases of small-pox. I may here remark that Dr. Biernacki, after having been Medical Superintendent of this Hospital for nearly three years, and having performed his very responsible duties in a most efficient, conscientious and skilful manner, resigned the appointment in August last, in consequence of his having been appointed to the post of Medical Superintendent to the West Ham Fever Hospital. On the 19th August, Dr. C. V. M'Cormack was appointed by the Sanitary Authority to fill the vacancy thus created, and he commenced his duties in the latter part of September.

DISINFECTING APPARATUS.

The apparatus used at the disinfecting station is "Washington Lyon's Patent," which can furnish a heat of 250° by superheated steam. The following is a list of the various articles disinfected during the year:—Mattresses, 882; beds, 676; pillows and bolsters, 1,455; sheets, 834; blankets, 725; quilts, 767; carpets, 450; wearing apparel, 1,249; sundries, 1,478—total 8,516. Occasionally when the articles sent are very foul or

have been used by patients suffering from very infectious diseases, such as small-pox (or typhus), they are burnt at the cost of the Sanitary Authority. Infected houses and rooms are fumigated by sulphurous acid gas, and carbolic powder is largely used around infected premises, foul middens, drains, &c., and the disinfectants are furnished free of cost. I will now proceed to make observations on the 7 principal zymotic diseases, stating all that could be ascertained as to the outbreak and extension of these diseases, together with the advice given and the measures taken to prevent their spread. The first zymotic I will remark upon is

SMALLPOX.

During the year 37 cases of smallpox in Bootle were notified, and all (excepting 2) were removed as soon as possible to hospital, but besides these 35 cases from Bootle, there were 8 other cases removed to the Linacre Hospital from the out-townships, so that altogether there were 43 cases of smallpox treated at this hospital. Of these 43 cases I am glad to say only 2 deaths occurred, and these were of children over 5 years of age, one of whom was unvaccinated. With regard to the origin of the outbreak of this loathsome disease, I will repeat, to some extent, the report I made to the Health Committee on the 14th January. It was as follows:—"I regret to have to report a very sudden and serious outbreak of smallpox in this Borough, no less than 15 cases having been notified and sent to hospital within 5 days, viz:—12 from Conway Street, 1 from Denbigh Street, and 2 from Audley Street. The first intimation that I had of the existence of the disease in this Borough, was, the notification of the case of a man at 29, Conway Street, from Dr. McPherson, in the evening of the 9th January. Later on the same evening, hearing of the probable existence of other cases in this house, I visited the other members of the family and found that all of them, viz., the man, his wife and 4 children, were suffering from smallpox. They were all removed to hospital on the same night. I then directed that Mr. Daly's (Sanitary Inspector) staff, should make a house-to-house inspection in the neighbourhood, with the result that I had to notify on the 10th Jan. one fresh case in 25, Conway Street, on the 11th 2 fresh cases, 1 in Denbigh Street and the other at 31, Conway Street, on the 12th 5 more cases, viz., 1 at 25, 2 at 31, and 1 at 39, Conway Street respectively, and 1 in Audley Street. I had also to visit and notify on the 13th January another case in Audley Street. All these cases were removed as soon as

possible to the Linacre Hospital, and every precaution taken with regard to disinfection, burning of bedding, stripping and burning of paper from walls, &c., to prevent the spread of the contagium. The origion of this outbreak of smallpox is very doubtful. I suspect that one of the children from 29, Conway Street, was the source of the contagion, as this boy, when I saw him, appeared to have nearly recovered from the disease, and had been playing with other children in the neighbourhood." On the 4th February I again reported to the Health Committee with reference to this serious outbreak of smallpox, the report was as follows: "Of the 13 smallpox cases notified since your last meeting, 7 were notified during the week ending 19th Jan., 3 during the week ending 26th Jan., and the 3 others during the last days of the month. The number of smallpox cases therefore appear to be decreasing. All the cases (excepting one) occurring in Bootle were removed to the Linacre Hospital. As I believe that isolation and vaccination are the only reliable preventives to the spread of the contagium of smallpox, I took upon myself the responsibility of procuring a supply of lymph (vaccine) from the Public Vaccinator, and I have vaccinated 55 persons (including 3 "Bus" guards) since the outbreak, nearly all of which persons belonged to the infected houses. I believe 3 of these were *primary* vaccinations, and the remainder were re-vaccinations. There were also (at least) 2 children sent to hospital suffering from the disease who were un-vaccinated." I may here mention, that in addition to the other precautions already mentioned, I wrote to the vaccination officer (Mr. Richard Morrow) stating that I had discovered several children who had never been vaccinated, and requesting him to use every endeavour to find out other un-vaccinated children. I believe the Vaccination Officer did use his utmost exertions to find out these unprotected children, but owing to the migratory character of the inhabitants of cottage property, it is often extremely difficult to trace out these children, who are always not only in danger themselves of catching the disease when it is epidemic, but are also a danger to the general community. On the 18th February I reported to the Health Committee 5 more cases of smallpox. With regard to the notifications of smallpox, I may here state briefly, that altogether 27 cases were notified in January, 6 in February, 2 in March, not one in April, one case in May and one in July—total 37. During this outbreak of smallpox the "Disinfecting Box," invented by Mr. Daley, our Chief Sanitary Inspector, was found very useful in disinfecting persons, as the box can be wheeled to the infected houses and persons can be thus disinfecting without having previously to pass through the public streets. I

may here state that I have entered very fully into the particulars concerning this outbreak of smallpox, in consequence of the important character of the outbreak, especially with regard to its suddenness and rapid spread, the prompt measures adopted to stop its progress, and the very satisfactory result of these measures. I feel certain that if it had not been for the isolation afforded by the Hospital at Linacre, and the prompt removal of the cases as soon as they were discovered, assisted also by the re-vaccination of persons from the infected houses, the disease would have rapidly spread to all parts of the Borough, whereas by the end of March the disease was practically stamped out.

MEASLES.

I think I can say with certainty, that at no time in the year was this zymotic, epidemic in Bootle. As however the notification of it is not compulsory, and as 2 deaths were registered from it, one in October, and one in December, I presume there must have been a few cases in the last quarter of the year, especially in December, because the disease has become epidemic in the present year 1896. The death-rate from this zymotic in Bootle was $\cdot 038$, a very low one, being $20\cdot 7$ below the average of the preceding 10 years, which low death-rate assisted very much in lessening the total zymotic death-rate. As the disease is very infectious, and is said to be so, even before the eruption appears, it is very necessary to prevent children being sent to school from infected houses.

SCARLATINA.

This disease was more or less epidemic (though not severely so) throughout the year, but on the whole the number of notifications and the number of deaths were both much less than in 1894, the number of notifications having been 300, and the number of deaths 13, in 1895, as compared with notifications 638, and deaths 36, in 1894. The percentage of deaths to notifications in 1895 was therefore only $4\cdot 3$, and the total number of deaths (after deducting the deaths of non-residents) was 23 less than in 1894. There is no doubt the type of this disease in Bootle during late years, has been much milder than in former years. I speak this from my own recollection, as during my long residence in Bootle, I remember some very fatal epidemics of this zymotic. Table No. 2 will show the number of notifications of scarlatina in each month of the year, and Table No. 4 gives

the number of deaths (including those in the Infectious Hospital) in the months when fatal cases occurred. It will be noticed that no fatal case occurred in February, March, May and August. The number of cases admitted into hospital from Bootle was 124 and from the out-townships 57, and of these 57 cases, the number from Seaforth exceeded that from the total number of all the other townships combined. The total number of cases of scarlatina, therefore admitted into the Linacre Hospital was 181, which number was 51 less than in 1894, and the total number of deaths from this disease in hospital was 14, 2 of which were of non-residents. The total number of deaths from scarlatina in this hospital in 1894 was also 14, but 4 were from the out-townships. The total number of deaths from this disease last year, was 10·3 less than the average of the preceding 10 years. After every case of scarlatina fumigation of rooms, stripping of paper from walls, disinfection of clothes, &c., at the shed are strictly enforced.

DIPHTHERIA.

The number of notifications of this disease was 18, and the number of deaths 12, the former being 14 less and the latter 7 more than in 1894. Two cases only were treated at the Linacre Hospital. Eight of the deaths were of children under 5 years of age, and the other 4 were aged 5 years and upwards. The total deaths exceeded the average of the preceding 10 years by 3·6. The zymotic death-rate was 0·23, 0·12 less than the average of the 33 large towns. Fortunately diphtheria is a disease which has not been very prevalent in Bootle.

CROUP.

The cases notified under the heading of croup were 9 in number, and the number of deaths registered as croup were 7. There is however such a similarity between these 2 diseases that many medical men believe they ought both to be classified as cases of diphtheria.

WHOOPING COUGH.

The number of deaths from whooping cough was 26, all of which excepting one, being of children under 5 years of age. The total number exceeded that in 1894 by 3 and was slightly over the average of the preceding 10 years. The death-rate in Bootle was 0·5, and exceeded the death-rate from this zymotic in the large towns by 0·13. The disease was most

prevalent in April, May, June, July, August, October and December when 5, 2, 4, 4, 2, 2 and 4 deaths respectively were registered. There was only 1 death in each of the months January, February, and November, and not one in March and September.

CONTINUED FEVER.

Typhus—There was no death from this very infectious disease during the year, nor indeed was there a single case notified, a very satisfactory fact to notice.

Enteric (or Typhoid) Fever—The total number of cases of enteric fever notified during the year was 187, this number being 107 less than in 1894, all excepting 14 being persons aged 5 years and upwards. The number of deaths registered was 27, but 4 of these were of persons from the out-townships, so that the total number of deaths of Bootle persons was 23, which number was 10 less than in 1894. As is usually the case in Bootle, the number of cases notified was greatest in the late summer and the autumn viz :—18 in July, 25 in August, 35 in September (the largest number) and 27 in October. The number of deaths in these months were 3, 2, 4 and 4 respectively, and there were also 4 deaths in November. The total number exceeded the average of the preceding 10 years by 4·6, but as will be noticed in Table No. 3 it was only half the number in 1893 and 10 less than in 1894. The death-rate 0·44 exceeded the average of “fevers” in the 33 large towns by 0·24 and was therefore larger than it should be. The number of cases of enteric fever admitted into the Linacre Hospital from Bootle was 105 and from the out-townships 30, therefore, the total number of cases admitted was 135. The number of cases from Bootle was 23 less and those from the out-townships 5 less than in 1894. The total number of deaths from this disease in hospital was 20, 16 of which were of residents and 4 non-residents, the total number 20 being 14·8 per cent of the enteric cases admitted, which percentage was almost exactly the same as that in 1894. The percentage of cases dying from Bootle was about 15·23 and that from the out-townships 13·33. The percentage of deaths from all the notified cases in Bootle was 12·3 and thus appears to be a more favourable percentage than that in the hospital, but it must be remembered that as a rule, a great proportion of the cases removed to hospital are of a more serious character than a large number treated outside, many cases indeed are not removed until late on in the attack, when serious symptoms and complications arise and when the strength

and resources of the friends nursing the patient at home are exhausted, and although, under these circumstances, the removal of the patient may be absolutely necessary, yet at this period of the attack, the removal must tend to lessen the chances of the patient's recovery. I think also there can be no doubt that a certain number of cases notified as enteric fever are not really cases of this fever. On the whole I think it is gratifying to notice that the number of deaths from this fever have gradually decreased since the epidemic in 1893, and it is very satisfactory to notice the decrease of deaths in 1895 when compared with the deaths in 1894. I am greatly to hope that the large number of middens that have been converted into w.c.'s must have been instrumental in causing this decrease of mortality from enteric fever.

With regard to the measures adopted for the prevention of this disease, I may state, that after the notification of every case, a sanitary inspector visits the house and premises to discover if possible any local defects that may exist, and if he finds defects or insanitary conditions, he has these remedied as soon as possible; he is also instructed to remove to hospital all the cases he can, and fumigate rooms and disinfect linen, &c. Disinfectants are also supplied free of cost and in short, every precaution taken to prevent a recurrence of the disease; notwithstanding these precautions, however, the disease will often reappear on the same premises. In my last report I mentioned how often I had observed enteric fever to appear in the same houses in consecutive years. A notable instance of this occurred in a certain milk house in this borough in September last, this being the third year in succession in which this fever had appeared in this milk house, in spite of stringent sanitary precautions having been taken on each occasion. In each year the disease appeared in September. In 1894 a number of sanitary improvements had been ordered, including the conversion of a privy-midden into a w.c. and we then thought that everything had been done to prevent the recurrence of the disease. However, in September last after receiving a notification of its reappearance I, accompanied by the two sanitary inspectors, again made a careful and thorough examination of the milk-house, shippon and premises, and came to the conclusion that the following sanitary work should be commenced at once:—1st. That the *subsoil* should be thoroughly drained, and that the terminal end of the subsoil drain should be disconnected. 2nd. That a concrete or other impervious floor should be placed down under the house, in order to prevent ground air finding its way into the house. 3rd. That the space beneath the floors should be thoroughly ventilated. 4th. That having found by the "smoke test" some defects in the

drains, that these drains should be taken up and relaid. I may here observe that the owner of these premises, seeing the urgency of this matter, at once complied with the request of the sanitary authority to rectify these sanitary requirements and completed the work most satisfactorily, the house being closed during the time the work was in progress. It is also a satisfaction to note, that although 4 persons were sent to hospital from this house, suffering from enteric fever, no case in the neighbourhood could be traced to the contamination of the milk.

DIARRHŒA.

I now come to the consideration of the zymotic which, as a rule, every year, largely increases the zymotic death-rate in Bootle, and assists considerably in increasing the total infantile mortality. It is certainly interesting to notice how regularly the advent of it comes on every year, as soon as the hot summer weather commences. Table No. 4 shows that in January, there were only 2 deaths, 1 an infant and the other an adult aged 60. There was no death in either February or March, 2 infants under one year died in April, 2 infants under one year and one child between 2 and 5 years died in May, 4 infants under one year died in June, and then *suddenly* in July no less than 52 deaths under 5 years, and one death of a child aged 5 years and 2 months occurred. Of the 52 deaths no less than 42 were of infants under 1 year, 8 were of infants aged 1 year and under 2 years, and 2 were of children aged 2½ and 4 years. In August the mortality from this disease had dropped to 24 infants under 2 years, of whom 14 were infants under 1 year. The mortality was still decreasing in September when 10 children died, 6 of whom were infants under 1 year. In October there were only 5 deaths, of which 4 were of infants under 1 year, and in November only one infant died.

Altogether the total number of deaths from diarrhœa in Bootle during the past year was 107, only 5 of which were aged 5 years and upwards, the remaining 102 being of children under 5 years. Of these 102 children no less than 76 were infants under 1 year, 23 were infants aged 1 year and under 2 years, and only 3 were children between 2 and 5 years. The 5 deaths over 5 years were as follows :—5 years and 2 months, 60 years, 78 years, 47 years, and 48 years. The total number 107 exceeded that in the cool year of 1894 by 62, was 42·3 above the average of the preceding 10 years, and the zymotic death-rate (2·05) exceeded that of the 33 large towns by 0·85 (or nearly 1 in

the 1000). With the exception of the large number of deaths from diarrhœa in the hot summer of 1893, the number of deaths from diarrhœa in 1895 was the largest number registered in Bootle for at least 12 years. As the mortality from diarrhœa in Bootle is always excessive, and increased the total mortality in 1895 by more than 2 in the 1000, I think it will be useful to review the principal causes of this disease, with the view of endeavouring to adopt some means, whereby the large infantile mortality from this disease may be lessened if not prevented. In the first place I may mention that as epidemic diarrhœa commences in the advent of the hot summer weather, but more particularly when the temperature of the subsoil at 4 feet below the surface rises to 56° Fahr, it is very necessary to prevent organic contamination of the loose porous sandy subsoil, particularly around the cottage property, in which subsoil the peculiar micro-organism of diarrhœa is said to reside. This subsoil is very readily fouled by leakages from privy-middens or from drains, cess-pools or other accumulations of filth whether vegetable or excremental. This fouling of the subsoil therefore ought carefully to be looked after, and after every death from diarrhœa, in my opinion, a sanitary inspector should visit the premises in which the death occurred to find out, if possible, sanitary defects and have them remedied at once. I believe such inspections are equally or even more urgently needed than after some of the infectious diseases. Such inspections are more necessary in my opinion, in the habitations of the very poor as partly from ignorance of the proper way to nourish and rear young infants, partly from want of cleanliness, the existence of insanitary surroundings and other causes the mortality is usually greater. As breast-fed infants are remarkably exempt from this disease, and as the mortality is very high in bottle-fed infants, the assistance of district nurses would be most useful to instruct ignorant mothers with regard to the cleansing of the bottles and preparing the nourishment, which in the form of milk and water ought to be always boiled, as the boiling of the milk destroys micro-organisms and ferments, including also the tubercle bacilli from tuberculous cows. As I have repeatedly pointed out, the providing of crèches for infants, whose mothers have to leave them in the day-time, would be of great assistance in lessening the mortality from this disease. I am strongly in hopes that a short Act of Parliament may shortly be passed for this purpose, and it is astonishing to me that in a county borough like Bootle, in which so many benevolent people reside, and which contains such a large labouring population, an institution for district nurses has not been started long ago.

CHOLERA.

No case of this disease was notified during the year nor was any suspicious case reported.

INFLUENZA.

In the early part of the year this disease was epidemic, and as the weather at that time was very cold, the number of deaths from diseases of the lungs was no doubt much influenced both by the severity of the weather and by the prevalence of influenza. The number of deaths registered as directly attributable to influenza was 12, of which number 2 occurred in February, 7 in March, 2 in April and 1 in May, all the deceased persons being above 5 years. The mortality from influenza is greatest in the middle and later periods of life and especially among those debilitated by disease or predisposed to bronchitis or pneumonia. The ages of the persons who died in Bootle from this disease appear to prove this, for of the 12 deaths only one was of a child aged 13 years. The ages of the other deceased persons were as follows ; 23, 34, 48, 2 at 58, 61, 62, 63, 65, 67 and 73, so that exactly half were elderly persons aged 61 and upwards. I find that I reported to the Health Committee on the 25th March that the large number of deaths registered during the present month has, in my opinion been due to the influenza epidemic. In corroboration of this, it will be seen on referring to Table No. 4 that out of a total of 106 deaths in March, 7 were referred directly to influenza and no less than 36 to bronchitis, pneumonia and pleurisy, and 10 to phthisis. In the previous month (February), out of a total of 190 deaths in 28 days, 2 deaths were registered as directly due to influenza, whilst no less than 46 were registered as deaths from the 3 diseases mentioned, and 6 to phthisis. It is therefore extremely probable that there was an epidemic influence in operation in these 2 months, and that a large number of these pulmonary diseases were really complications of influenza.

OTHER ZYMOTICS.

The deaths from zymotic diseases of minor importance to those already commented on were as follows :—puerperal fever 1, erysipelas 1, rheumatic fever 1, syphilis 3, purpura 1, pyæmia and Septicæmia 1. The mortality from these diseases, therefore, was very satisfactory. particularly with regard to erysipelas, for it appears that out of a total of 45 notifications, only 1 death occurred.

DISEASES OF UNCERTAIN OR VARIABLE SEAT.

The deaths from these diseases numbered 31, all being (excepting one) of persons over 5 years. Of the total number of deaths 22 were of persons who died from cancer, a decrease of 4 when compared with those in 1894.

DISEASES TUBERCULAR.

One hundred and two deaths from this class of diseases were registered during the year, a decrease of 15 when compared with those in 1894. Of these 68 were due to phthisis (a decrease of one), 24 to *tabes mesenterica*, 6 to tubercular meningitis, 1 to tubercular-peritonitis and 2 to *scrofula*, and 1 to hydrocephalus. There were also 19 deaths from phthisis in the work-houses, but 3 persons died in Bootle from this disease not belonging thereto. The increasing attention which is bestowed on this disease every year by sanitarians the fact of its being infectious, and the large amount of information obtained by experimental work, shown by the reports lately submitted by the commissioners in the report of the royal commission on tuberculosis, must convince every one of the great importance of these investigations and the necessity that exists of preventing as far as possible, if not altogether, the production and spread of this deadly disease. The precautions indicated to safeguard the public against the production of this disease, are:—1st, to destroy the bacillus in the expectoration before it becomes dried and pulverised and then inhaled into the lungs. 2nd. To supervise cows in order to prevent the sale of milk from tuberculous udders. 3rd. In order to make our food supply perfectly wholesome and nutritious, it is necessary to eliminate all tuberculous animals from our stock, dairies and markets by gradually weeding out tuberculous stock, and by careful and judicious confiscation of tuberculous carcasses. By energetic action of this kind, the evil is attacked at its root, for the necessary precautions of boiling milk, and thoroughly cooking meat should be only temporary expedients, because, even when these precautions are taken, especially in the case of meat, tubercle bacilli may escape destruction, and under certain conditions there appears to be no doubt that the human organism is specially susceptible to infection by even partially devitalised tubercle bacilli. All these facts have been elucidated by the royal commission on tuberculosis, and I think the public require to be educated on this subject, and to co-operate with sanitary authorities in an intelligent manner. To show how little the owners of cottage property will listen to advice, when given with the best intentions, I may mention that in

November last, I suggested to the Health Committee that the bed-rooms occupied by persons who had died from phthisis, should be thoroughly cleansed, disinfected, and the paper stripped from the walls in order to prevent the communication of the disease to persons who would subsequently occupy the same rooms as the deceased persons. In consequence of this recommendation, the Health Committee issued a notice to owners of property offering to disinfect rooms, upon their agreeing to strip the paper from the walls, and thoroughly cleanse the rooms. I really thought owners of property would readily comply with such a reasonable request, when they considered the bad name a house would get if repeated deaths should occur in it from this disease. The sanitary inspector afterwards informed me, that in the first case that this offer was made, the owner of the premises ridiculed the idea and positively refused to pay the small cost of repapering the room. No further attempt was made to carry out my recommendation and it is therefore apparent that in order to combat successfully with this disease legislation is urgently requisite.

DISEASES OF THE BRAIN, SPINAL MARROWS, &c.

The number of deaths registered from this class of diseases was 97, of which 52 were of children under 5 years of age. The total number was 13 more than that in 1894, and the number of deaths of children was 13 more than in 1894. The deaths of infants registered under the vague term of "convulsions" was 21.

DISEASES OF HEART AND BLOOD VESSELS.

The number of deaths registered from these diseases was 41, a decrease of 4 when compared with the deaths in 1894.

DISEASES OF THE LUNGS AND AIR PASSAGES.

The total number of deaths from these diseases was 276, which number exceeded that in 1894 by 86, and even exceeded the number in 1893 by 44. Of the total number 136 were of children under 5 years. The deaths from this class of diseases therefore largely exceeded those in the previous year, the principal cause of the excess being the severity of the weather, and the prevalence of influenza in the winter and spring months. There were also a

large number of deaths from these diseases in November and December. The total number of deaths in each of the 4 months February, March, November and December was 46, 36, 34 and 31 respectively, making altogether 147, which was more than half the total number of deaths from these diseases in the year. As however 36 Bootle persons died in the workhouses and therefore out of the district, and 3 died in Bootle not belonging thereto, the difference 33, ought to be added to the 276 registered in Bootle—this would increase the mortality from these diseases to 309.

OTHER DISEASES.

The deaths from "other diseases" in 1895, when compared with those in 1894 were as follows:—Diseases of kidneys, bladder, &c. 29, an increase of 13; diseases of uterus, child-birth, &c., 13, an increase of 8; diseases of stomach, liver, &c., 59, a decrease of 9. I may remark here that under this last-named heading 7 deaths were registered from enteritis, 13 from gastro-enteritis and 1 from gastric catarrh, and of the 21 deaths from these diseases, 16 were of children under 5 years. Probably the majority of these 16 deaths should have been included with those from diarrhoea. In addition 3 deaths were registered from diseases of bones, one each from diseases of the skin and eyes, 7 from malformation, no less than 36 from premature birth, 19 from atrophy and debility, 18 from old age and natural decay. The deaths of 16 persons (an increase of one) were registered during the year, aged 80 and upwards—viz., 1 in January, 4 in February, 1 in March, 2 in April, 1 in June, 1 in August, 4 in October, 1 in November, and 1 in December. Of these 16 old persons 3 died aged 80, 1 aged 81, 1 aged 82, 2 aged 83, 1 aged 84, 2 aged 85, 4 aged 86, 1 aged 87 and 1 aged 88. In addition to these old persons who died in Bootle, 3 old Bootle persons died in Walton Workhouse, 2 aged 84 and 1 aged 82. Unfortunately one cannot always depend, that the friends of these old people register their deaths correctly, although I believe that, as a rule, the age is more often under stated than the reverse.

DEATHS THROUGH VIOLENCE, &c.

Seventy-six deaths through violence, &c., occurred during the year, being an increase of 23 when compared with the number from the same cause in 1894. This was a considerable increase, but in addition 5 deaths were registered from "natural causes," the precise cause not being shown. Of the 76 deaths, 21

were of children under 5 years of age, and the causes of these deaths were as follows : 38 (an increase of 14) were due to *injuries* either from accidents or negligence, 5 were from *drowning* or *effects of immersion*, 17 were from *burns* or *scalds*, 5 were from "*suffocation*," 3 were from *suicide*, 2 from *man-slaughter*, 3 from *poisoning*, and 3 persons were "*found dead*," the cause not being clearly proved. There were exactly the same number of deaths, viz., 44, that were "*uncertified*," by any medical practitioner, as in 1894, but as the total number of deaths during last year was larger than in 1894, the percentage of these deaths was slightly smaller, being a little over 4 per cent, and of the total number 19 were of children under 5 year of age.

INQUESTS.

The number of inquests held during the year was 84, an increase of 20 when compared with the number in 1894. The number of inquests in each month was as follows :—January 7, February 7, March 5, April 4, May 8, June 7, July 8, August 7, September 6, October 13, November 5, December 7. It will thus be seen that 7·8 (or nearly 8) per cent of the deaths in this borough formed the subject of legal inquiry.

HORSE AMBULANCE.

This ambulance has continued to do most useful work. Altogether it has turned out to 446 cases during the year—313 cases between 6 a.m. and 6 p.m., and 133 between 6 p.m. and 6 a.m. The ambulance is worked by the members of the Fire Brigade, every one of whom I believe, has been specially trained and examined and is a member of the St. John's Ambulance Association. The Ambulance is also worked in the same expeditious manner as an engine is worked when turned out for a fire, and can be sent out in less than a minute after an alarm has been given. The ambulance carriage itself was built in the most improved style, regardless of cost, and since it was presented to the Committee of the Bootle Borough Hospital in the year 1889, it has saved an immense amount of suffering and probably many lives.

PUBLIC BATHS AND GYMNASIUM.

The following is the report of the manager of these Baths and Gymnasium, Mr. McMahon :—

Baths—The numbers attending the baths fluctuate very much. Wet, equally with cold weather, militates against good and regular attendances. The following numbers attended during the year from January to December, 1895 :—males, 56,708 ; females, 10,888—total, 67,596. The receipts for the baths for the same period were £925 14s. 6d.

The *Gymnasium* continues to be popular, especially among the young people. The number attending during the winter of 1895 was as follows :—Gentlemen's class, 85 ; boys' class, 40 ; ladies' classes, 132 ; school children's classes, 204—total 461. The income from the gymnasium for the winter of 1895 was £71 14s. 8d. The ladies and gentlemen attending the gymnasium seem to appreciate and enjoy the exercises very much, owing probably to their having less facilities than gentlemen for out-door exercise. There has been a slight decrease in the number attending the gentlemen's class for the winter season of 1895. Palpable and acknowledged benefit has been derived by several young people who have attended the gymnasium.

SANITARY WORK.

Table No. 5 contains the Sanitary Inspector's Report, and again shows the large amount of sanitary work accomplished during the year. The epidemic of smallpox caused an immense amount of work in the Sanitary Inspector's Department, particularly at the time of its invasion and for the remainder of the month of January. The removal of the patients to hospital, and afterwards, the disinfecting of the persons remaining in the houses in the "disinfecting box," the disinfecting of the clothing, bedding, &c., and the fumigating of the houses, altogether taxed the resources of the department to the utmost. There was also a good deal of work done in connection with disinfecting, &c., after the 300 scarlatina cases, and also the other infectious or contagious diseases. During the year 504 houses were disinfected, and in each case notices were sent to the owners to cleanse the infected rooms. Of this number 14 houses were cleaned by the Local Authority, under the Infectious Diseases (Prevention) Act, 1890, the owners having failed to comply with the notices served on them. This work entailed 1,424 inspections. Disinfectants were taken to each infected house immediately on the notification of the disease.

NUISANCES.

During the year nuisances were reported to exist in 2,164 private houses. Of this number 380 houses were inspected by special request of tenants. The

nuisances dealt with include defective drainage, w.c's., sinks, bath and wash-basin waste-pipes, roofs, downspouts, yard surfaces, ventilation, filthy houses, accumulations of filth, manure, stagnant water and other refuse, fowls and animals improperly kept. Reinspections of premises were made and the necessary steps taken to abate the nuisances. Owners were summoned in twenty instances for non-compliance with notices.

INSPECTION OF LODGING HOUSES.

The Sanitary Inspector reports that the number of houses registered in Bootle, under the Public Health Act is 201, and that the number of houses newly registered during the year was 49, but 64 houses were vacated by the keepers, so that the number of houses now on the register is 186. The Inspector also reports that the number of day and night inspections were 2,614, and that the number of infringements of the bye-laws were 171; of these 4 cases were brought before the magistrates.

INSPECTIONS OF DAIRIES, COWSHEDS, AND MILK-SHOPS.

The number of persons on the register for the sale of milk during the year was 125. The number of inspections made was 697. Number of notices served for defects found to exist 74. There were 2 dairies in which fever was found to exist, but the precautions that were immediately taken prevented the spread of these fevers. The precautions taken were as follow:—the immediate removal of the patients to hospital, the destruction of all the milk in the infected premises, thorough fumigation and disinfection of premises, clothes, &c., and water supply carefully examined.

INSPECTION OF BAKEHOUSES.

On the 4th September, accompanied by the two sanitary inspectors, I made my annual inspection of the bakehouses in this Borough. I found the number of bakehouses in use to be 32. Taken altogether they were in fairly good order, but notices were afterwards sent to limewash and cleanse 17, and there were 2 bakehouses found to have sanitary defects which were afterwards remedied.

INSPECTIONS OF WORKSHOPS.

The Sanitary Inspector reports that the number of workshops on the register last year was 73, an increase of 13 when compared with 1894. This work is principally performed by Inspector M'Culloch, and has lately largely increased through recent legislation. The work has been well done, and 40 defects were reported and remedied during the year, these defects being principally with respect to overcrowding, want of cleanliness and of sufficient ventilation.

FOOD INSPECTIONS.

During the year 6 seizures of unsound food were made, the total amount being about 12,420 lbs. The particulars of these seizures were as follows:—

7 lbs. fish from shop in Peel Road. Fined 20s. and costs.

8 lbs. meat from shop in Irlam Road. Fined 20s. and costs.

8 lbs. meat from shop in Marsh Lane. Fined 10s. and costs.

20 lbs. meat from shop in Peel Road. Ordered to be destroyed.

12,377 lbs. of unsound food have been destroyed by consent of the owners without the formality of a magistrate's order. Also a number of crates of rotten eggs imported from Egypt and landed in the Bootle docks.

INSPECTION OF CATTLE SHIPS.

These inspections are of a very important character, particularly in my opinion, with regard to the cleansing and disinfecting of the "cattle fittings," for if this duty is not properly performed, cattle disease might be imported into the interior of the country. 772 inspections and re-inspections were made during the year by Assistant Inspector Owens, under the direction of Inspector Daley. 9 infringements were reported, being 3 for neglecting to cleanse cattle ships, and 6 for neglecting to cleanse and disinfect the "cattle fittings." In each case legal proceedings were taken and the responsible persons fined.

CANAL BOATS.

As the Leeds and Liverpool Canal runs through Bootle inspections of canal boats have to be made, although Bootle is not a registering district. These inspections are also made by Assistant Inspector Owens, under the direction of the Chief Sanitary Inspector, and 332 of these inspections were made during the year. 11 infringements were reported and notices sent to the owners and masters, who, in each case remedied the defects reported.

SYSTEMATIC INSPECTIONS.

During the year, accompanied by the two Sanitary Inspectors, I again made a large number of systematic inspections, our attention being particularly directed to the condition of the privy-middens, with the view of getting them converted into w.c.'s., when they were found to be in an insanitary condition. More than a 1000 of these middens have been inspected in this manner, and the result of these inspections has been duly reported to the Health Committee, together with other sanitary defects that came under our notice. I have also at various times made other inspections in cases that appeared to require special attention or special action to rectify sanitary defects.

WATER SUPPLY.

Table No. 8 gives the analyses of the hard and soft water supplied by the Liverpool Water Committee to Bootle and other districts in the four quarters of the year. These analyses are supplied every quarter to the Bootle Corporation, together with the distribution of the said waters. At the end of the 3rd quarter we received the information that the Water Committee had been working no wells in the Bootle District since the 1st July, and it will be noticed that no analysis of the Bootle well water was given in this quarter, and also, it was reported that the water supplied in this quarter was a mixture of the two soft waters Vyrnwy and Rivington. At the end of the 4th quarter, the water engineer reported that the water supplied to us during this quarter was a mixture in varying proportions of Vyrnwy and Rivington, with occasionally a small proportion of the Green Lane well water in Liverpool. He also stated *that the Bootle well had been permanently closed*, and on inquiry I found that the machinery, pumps and plant had been sold, and the buildings are now being demolished. I think it is some satisfaction for us to know that in future we shall probably have a more *uniform* supply, and not a mixture of hard and soft waters in the mains with occasional changes of entirely hard to soft water for drinking. The water supplied to us at present is certainly a good wholesome soft water, and for domestic purposes, boilers, &c., superior to the hard water from the Bootle well.

THE DESTRUCTOR.

During the year the destructor has been of great service, and has burnt 6,340½ tons of refuse matter that could not have been easily disposed of as

in past years. The Borough Surveyor informs me that he was able to sell some of the excremental refuse matter to the farmers at a small profit to the Corporation. It is sent away by boats into the rural districts along the canal, but about half the refuse matter has been burnt in the destructor. The number of ash-pits emptied in 1895 was 37,902. The "clinkers" remaining after the burning of this refuse matter have been found very useful in making the foundations of roads in the New Ornamental Park, and after having been ground down in a mortar-mill a large quantity have been converted into very useful and serviceable concrete flags.

THE NEW PARK.

This park, which has been named "Derby Park" after the Earl of Derby, was opened to the public in August last. The whole of the plans have been drawn by Mr. J. A. Crowther, the Borough Surveyor and Engineer, who has personally superintended the work. The task has been an arduous one for the Surveyor and the Parks Committee, under the able chairmanship of Mr. Councillor A. Morton, but the work has been so successfully carried out, that its success must be a source of pride and satisfaction to everyone who has been connected with it. The land, covering an area of 22 acres, was generously given to the Corporation by the Earl of Derby, and is situated near Breeze Hill, in the north-eastern portion of the borough, close to the Walton boundary. The cost of carrying out the plans and designs of this ornamental park will be about £24,000 when perfectly complete. Although far from complete at present yet the park has been laid out in the most tasteful manner, and the idea which has been ever kept in mind has been to arrange the park so as to afford the utmost amount of shelter from the prevailing north and north-westerly winds. This has been successfully accomplished by raising mounds and forming shelters where practicable. But in carrying out this object the effect of pleasing the eye has not been neglected, for by making undulating grassy mounds, skirting flower beds with flowers of every variety of colour, by cutting out dells surrounded by walls of the natural rock (red sandstone) thus forming bowers or arbours, this has been accomplished in a very attractive manner, and at the same time has shaded from the bleak winds, and has made, delightful retreats in almost any season. For the amusement and recreation of young persons, the park contains a large ornamental band stand, 3 large greens for bowls, lawn tennis, croquet, &c., besides other smaller greens. One of the most attractive portions of the whole

park is the ornamental lake, covering an acre and a half of water area, which will be well stocked with fish, and when frozen in winter, is visited by a crowd of skaters. I think there can be no doubt that every year will make this park more attractive and increase its popularity, but what is in my opinion, of more consequence, it will largely conduce to the health and physical stamina of the rising generation of this Borough.

ADULTERATIONS.

Sale of Food and Drugs Act—The Chief Constable (Mr. James Cumming) and Inspectors Leslie and Ferguson have the carrying out of these acts during the year. Table No. 7 gives the number of samples taken and sent to the public analyst, the result being that out of 93 samples taken, 6 persons were prosecuted for adulterations—4 being convicted and 2 discharged. The table also gives a description of the food, &c., submitted for analysis.

SANITARY PROCEEDINGS AND ADVICE, &c.

In accordance with Act 14, Section 4, of the Local Government Board's Order, I will now refer to "Proceedings relating to conditions dangerous or injurious to health, in which I have taken part or advised" the Sanitary Authority during the year. I have reported regularly every fortnight during the year on the vital statistics of the Borough, the sanitary requirements and the work accomplished, together with special reports when necessary. The sanitary proceedings have I think been fully commented on in the previous part of this Annual Report, and I think it is unnecessary to make any further remarks on this subject, in this concluding paragraph. I regret, however, to point out that partly in consequence of the very cold weather in the winter and spring months, the prevalence of influenza and the consequent mortality from diseases of the lungs, and also the increased mortality in the hot weather of July and August from infantile diarrhoea, the death-rate of the Borough for 1895 when compared with 1894 increased from 18·4 to 21·55 per 1000. My time during the year was again much occupied by inspections of the cottage property with the Sanitary Inspectors, and reporting to the Health Committee the results of my inspections, together with the recommendations and advice which I submitted in order to improve this class of property. I have again strongly advised the conversion of the privy-middens into w.c.'s, as I am convinced from long experience that to prevent or lessen the regular

recurrence of infantile diarrhœa and enteric fever in the summer and autumn the former ought to be abolished. The question of the water supply to this Borough is now, I think, practically settled, as the pumping machinery for the Bootle wells is sold, and the wells closed, so that, I hope in future, we shall be supplied constantly as in Liverpool, with the soft Vyrnwy and Rivington waters in an uniform manner. In July, I was asked to report on some premises in Sandfield Place, Marsh Lane, where I found a man had recently started a bone-boiling business. As these premises were quite unsuitable for such an offensive trade, particularly in a crowded neighbourhood like that of Marsh Lane, I gave an opinion that this business ought not to be allowed, and the Health Committee in consequence refused to give permission for the establishment of this business.

(Signed) R. J. SPRAKELING,

Medical Officer of Health.

21st March, 1896.

A. TABLE OF DEATHS during the Year 1895, in the Urban Sanitary District of Bootle (County Borough) : classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (Columns for Population and Births are in Table B.)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.										MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																						
	At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	(i)	Smallpox.	Scarlatina.	Diphtheria.	Membran- ous Croup.	Typhus.	Enteric or Typhoid	FEVERS.				Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea & Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia and Pleurisy.	Heart Disease.	Influenza.	Injuries.	All other Diseases.	Total.		
		(b)	(c)	(d)	(e)	(f)	(g)								(h)	5 Typhoid	6 Continued	7 Relapsing														8 Puer- peral.	9 10
WARDS.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)																								
Derby.....		227	80	38	11	11	62	25	5 upwds	Under 5	2	3																					
												1		1																			
Knowsley		345	135	69	19	17	75	30	5 upwds	Under 5	2	1	2																				
												1	1	3																			
Stanley		376	116	55	16	13	124	52	5 upwds	Under 5	3	2	3																				
											1	2	1	3																			
PUBLIC INSTITUTIONS:										Under 5																							
Bootle Borough Hospital		87	4	13	10	6	48	6	5 upwds																								
Corporation Hospital for Infectious Diseases		30	13	5	3	9			5 upwds	Under 5	6	2		5																			
										Under 5				15																			
Mortuary		10					9	1	5 upwds	Under 5																							
										Under 5	13	8	5	5																			
TOTALS		1075	335	188	61	50	327	114	5 upwds		2	1	4	22																			

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

Deaths occurring outside the district among persons belonging thereto.	101	5	3	1	7	57	28	5	upwds	Under 5	1																		1	3			3	8
Deaths occurring within the district among persons not belonging thereto.	66	1	9	5	4	44	3	5	upwds	Under 5				2			3																	

R. J. SPRAKELING, *Medical Officer of Health*, Area and Population of the District or Division to which this Return relates.
 21st March, 1896. Area in Acres, 1590. Population (1891, 49,217). Estimated (1895), 51,500.
 Death Rates—General 21.55 per 1,000 Population. Infants 183.7 per 1,000 Births Registered.

B. TABLE OF POPULATION, BIRTHS, AND NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1895, in the County Borough and Urban Sanitary District of Bootle: classified according to Diseases, Ages and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.												
	Census 1891.	Estimated of 1895.			FEVERS.												Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Totals.	
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Totals.													
(a)	(b)	(c)	(d)	(e)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12
WARDS.																													
Derby.....	49,217 in 1891.	51,500.	1823.	Under 5 5 upwds.	5	36	1			37	1		1		11		28	4	21			2							8
Knowsley.....				Under 5 5 upwds.	2	46	1	4		5					2		60	2	22	1		3							28
Stanley.....				Under 5 5 upwds.	25	69	9	1		68	1		1		12		186	24	32		39								95
				Under 5 5 upwds.		50	2	2		8					1		63		14	1		3							18
TOTALS IN BOOTLE	49,217	51,500	1,823	Under 5 5 upwds.	5	75	2	2		68	1		1		19		173	5	29		37								71
				Under 5 5 upwds.	2	120	6	6		14					3		151	2	42	2	8								54
Seaforth.....				Under 5 5 upwds.	35	180	12	3		173	3		3		42		451	33	82		96								211
Waterloo.....				Under 5 5 upwds.														7											7
				Under 5 5 upwds.														3	26			20							49
				Under 5 5 upwds.														1	1										2
				Under 5 5 upwds.														3	6			1							10
Litherland.....				Under 5 5 upwds.															1			1							2
				Under 5 5 upwds.														1	10			5							16
Crosby.....				Under 5 5 upwds.															6			3							9
Totals from the out-districts				Under 5 5 upwds.														1	9			1							11
				Under 5 5 upwds.														7	48			29							84
TOTALS	49,217	51,500	1,823	Under 5 5 upwds.	2	120	6	6		14					3		151	3	51	2		9							65
				Under 5 5 upwds.	35	180	12	3		173	3		3		42		451	40	130		125								295

Notification of Infectious Diseases in the district was adopted 1st June, 1891. The Corporation Hospital for Infectious Diseases, Linacre, is situated in Derby Ward.

TABLE No. 1—Tabular Statement of the number of *Births* and the Number of *Deaths* and *Infant Mortality* in each Month in 1895, comparing these numbers with those in 1894; also the Percentage of Deaths under 5 Years to total Deaths in 1895.

	BIRTHS.			DEATHS.			DEATHS 1894. Total.	INFANT MORTALITY			INFANT MORTALITY, 1894.	
	1895. Quarters.		1894. Q'rtrs	1895.				Under 1 Year.	1 Year & under 5.	Percent'ge of Deaths under 5 Years to Total Deaths.	Under 1 Year.	1 Year and under 5 Years
	Males.	F'males		Males	Females.	Total.						
January ...	86	82	426	39	42	81	91	17	13	37.03	27	18
February..	82	74		48	52	100	81	21	15	36	27	15
March.....	67	83		51	55	106	75	37	12	46.22	17	12
April	83	75	384	36	35	71	65	23	13	50.7	15	9
May.....	77	75		41	30	71	71	14	15	40.84	8	12
June	88	69		45	39	84	63	26	12	45.23	14	17
July.....	93	76	421	76	57	133	79	75	25	75.18	28	15
August ...	80	72		51	44	95	82	39	20	62.1	35	6
September	74	53		42	41	83	95	22	21	51.8	36	13
October ...	70	84	429	52	34	86	83	23	13	41.86	26	11
November.	81	73		43	34	77	58	21	10	40.26	13	7
December.	63	63		49	39	88	74	17	19	40.9	16	15
	944	879	1660	573	502	1075	917	335	188	48.65	262	150
	=1823											

TABLE No. 2—Number of Infectious Cases notified to Sanitary Authority in each Month of 1895.

1895.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Small-pox	27	6	2	—	1	—	1	—	—	—	—	—	37
Scarlatina	30	14	29	14	23	9	23	26	37	34	38	23	309
Diphtheria	2	1	—	2	—	1	1	3	2	3	1	2	18
Typhus.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric (or Typhoid) ...	16	6	4	7	12	14	18	25	35	27	15	8	187
Simple Continued Fever	—	—	—	—	1	—	1	1	—	—	—	—	3
Membranous Croup	2	—	1	—	—	—	3	—	1	—	—	2	9
Erysipelas	—	3	5	—	1	8	3	7	3	7	4	4	45
Puerperal Fever.....	—	—	1	1	—	—	1	—	—	—	—	—	3
	77	30	42	24	38	32	51	62	78	71	58	39	602

TABLE No. 3—Shows the Number of Deaths from the Seven Principal Zymotic Diseases in the Ten Years, 1885 to 1894 (inclusive) and in the Year 1895.

DISEASES.	1885.	1886.	1887.	1888	1889.	1890	1891.	1892.	1893.	1894.	An'nal Av'ge of 10 Years, '85-'94	Total Deaths in 1895.	Do after d'tn & add'g Dths from outside and inside Borough
Small-pox	21	—	—	—	1	—	—	—	4	—	2.6	2	2
Measles	33	20	33	14	30	16	35	7	24	15	22.7	2	2
Scarlatina	6	29	26	18	8	27	31	32	20	36	23.3	14	13
Diphtheria.....	13	7	10	7	12	6	7	14	3	5	8.4	12	12
Cont'd Fevers (Typhus	2	—	—	—	3	1	—	1	—	—	1.7	—	—
Enteric or Typh'd	13	11	8	19	17	8	13	16	46	33	18.4	27	23
(Simple Continued	—	—	—	—	—	2	1	—	—	—	1.3	—	—
Whooping Cough.....	21	18	32	13	20	50	35	6	34	23	25.2	26	26
Diarrhœa	29	84	80	51	74	61	52	40	131	45	64.7	107	106
	144	138	189	122	165	171	174	116	262	157	166.3	190	184

TABLE No. 4—Summary of the Causes of Deaths during the year 1895.

NAMES OF DISEASES.	1895.		JAN.	FEB.	MAR.	APR.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.	
	Under 5	Up 5 and up													Under 5	Up 5 and up
ZYMOTIC DISEASES.																
Smallpox	1				1										1	2
Measles															13	1
Scarlatina															8	4
Diphtheria															5	22
Typhus															25	27
Typhoid or Enteric															102	26
Simple Continued															5	107
Whooping Cough	1														2	7
Diarrhoea and Dysentery	1														1	1
Croup (Membranous)															1	1
Pauper's Fever															1	1
Erysipelas															1	1
Rheumatic Fever															3	3
Syphilis															1	1
Purpura															1	1
Pyæmia and Septicæmia															12	12
Influenza															1	30
Dis. of uncertain seat, incl'ding Cancer ²²															32	70
Diseases Tubercular (Phthisis 68)															4	52
Diseases of Brain, Spinal Marrow, &c.															2	39
Diseases of Heart and Blood Vessels															17	136
of Lungs and Air Passages	10	14	16	30	19	17	10	11	10	6	6	9	14	20	2	39
of Stomach, Liver, &c.	2	4	5	1	3	1	3	5	4	2	3	1	2	2	4	25
of Kidneys, Bladder, &c.	1	1	1	2	1	1	1	1	2	2	1	2	2	3	4	13
of Uterus, Childbirth, &c.	1	1	1	1	3	1	1	1	1	2	1	2	2	1	7	7
Malformations															36	36
Premature Birth															17	2
Atrophy and Debility															18	18
Old Age and Natural Decay															1	2
Diseases of the Bones, &c.															1	1
Diseases of the Skin															21	55
Diseases of the Eye															1	4
Deaths through Violence, &c.															19	25
Natural Causes															52	52
Not Certified (causes doubtful)															52	52
	30	51	36	64	49	57	36	35	29	42	38	46	31	46	36	52
	81	100	106	100	71	84	71	84	133	95	83	86	77	88	88	88
	115+172=287		103+123=226		202+109=311		103+148=251		552		1075		1075		1075	
	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		YEAR.							

TABLE No. 5.

INSPECTOR OF NUISANCES REPORT FOR THE YEAR 1895.

NUISANCES.

No. of Special Complaints	...	...	...	...	380
„ Houses Inspected	...	...	...	...	3080
„ Nuisances Reported	...	...	...	2164	
„ Re-inspections in reference to same	...	...	...	2838	
				—	5002
„ Inspections of Middens	...	...	...	...	1109
„ Cases in which Summonses were issued	...	...	...	...	20

DISINFECTION.

No. of Houses or parts of Houses disinfected	...	...	...	...	504
„ Notices sent to cleanse same...	...	...	...	...	504
„ Houses cleansed by Corporation in default of owners	...	...	...	...	14
„ Times bath and disinfecting box used by staff	...	...	...	...	489
„ Inspections of Infected Houses	...	...	...	...	1424
„ Fever cases removed to hospital—					
From Bootle	...	...	...	...	260
„ Seaforth	...	...	...	...	56
„ Waterloo	...	...	...	...	12
„ Crosby	...	...	...	...	9
„ Litherland	...	...	...	...	17
„ Ford	...	...	...	...	1
				—	355

COMMON LODGING HOUSES.

No. of Houses registered under the Public Health Act	...	...	...	...	201
„ Houses newly registered	...	...	...	...	49
„ Houses vacated by Keepers	...	...	...	...	64
„ Houses now on the Register	...	...	...	...	186
„ Day and Night Inspections	...	...	...	...	2614
„ Infringements of Bye-Laws	...	...	...	...	171
„ Cases brought before Magistrates	...	...	...	...	4

DAIRIES, COWSHEDS AND MILKSHOPS.

No. on Register	...	...	...	...	...	125
No. of Inspections made	...	...	...	...	...	697
„ Notices served for defects found to exist	...	...	...	...	...	74
Dairies, &c. in which fever occurred during the year	...	...	...	...	...	2

CATTLE SHIPS.

No. of Inspections of Cattle Ships	...	...	...	...	772
„ Cases brought before Magistrates	...	...	...	...	9

CANAL BOATS.

No. of Inspections of Canal Boats	...	...	...	...	332
„ Infringements reported	...	...	...	...	11

WORKSHOPS.

No. of Registered Workshops	...	...	...	...	73
„ Defects reported and remedied during the year after inspection of above...	...	...	...	...	40

BAKEHOUSES.

No. of Bakehouses in use	...	...	...	...	32
„ Notices sent in reference to cleansing same	...	...	...	...	17
„ Bakehouses found with sanitary defects and remedied	...	...	...	...	2

Table No. 6.—Legal Proceedings.

Breaches of Common Lodging House Regulations	...	...	...	...	...	4
Nuisances—Defective Drains	...	...	...	...	...	3
„ „ Soil Pipe...	...	...	...	...	...	1
„ „ Rain Gutters	...	...	...	...	...	1
„ „ Middenstead	...	...	...	...	...	1
„ Smoke Nuisance	...	...	...	...	...	1
„ Depositing offensive rubbish on waste land	...	...	...	...	...	2
„ Pigs so kept as to be a nuisance	...	...	...	...	...	3
„ Geese, Goats, &c. so kept as to be a nuisance	...	...	...	...	...	2
Failing to obey Magistrates' Orders	...	...	...	...	...	2

DISEASES OF ANIMALS.

Neglect to cleanse Cattle Ships	...	...	...	...	...	3
„ „ Cattle Fittings	...	...	...	...	...	6

TABLE No. 7.

PROCEEDINGS TAKEN UNDER THE FOOD AND DRUGS ACT,
FOR THE YEAR ENDING 31st DECEMBER, 1895.

Description of Samples Taken.	No. of Samples Taken.	No. of cases in which legal proceedings have been taken.
Butter 	17	1
Coffee 	6	...
New Milk 	42	2
Whisky 	4	1
Vinegar 	6	...
Cheese 	12	...
Mustard 	8	1
Sugar 	3	...
Total ...	93	5

NOTE—Six persons were prosecuted, four were convicted, and two discharged.

TABLE No. 8.—ANALYSIS OF HARD AND SOFT WATERS SUPPLIED BY THE LIVERPOOL WATER COMMITTEE, TO LIVERPOOL,
BOOTLE AND OTHER DISTRICTS IN THE FOUR QUARTERS OF 1895.

Description.	Analyst's Report 1895.	DATES OF Samples Drawn 1895.	Total Solid Matter in Solution	Organic Carbon.	Organic Nitrogen	Ammonia.	Nitrogen as Nitrates	Total combined Nitrogen	Chlorine	Total Hardness.	Remarks.
Vyrnwy	28th Mreh.	28th March	6.08	.259	.029	.002	.000	.081	0.9	2.86	Slightly Peaty
Green Lane Well	...	...	31.28	.037	.017	.000	.437	.454	3.3	16.29	Clear and Bright
Dudlow Lane "	...	...	16.2	.061	.017	.000	.415	.432	3.1	6.43	Ditto
Windsor "	...	...	37.2	.041	.024	.002	.437	.463	4.0	26.28	Ditto
Bootle "	...	...	42.72	.056	.016	.000	.437	.453	4.2	25.72	Ditto
2nd Quarter—											
Vyrnwy	24th June.	5th & 7th June.	4.96	.238	.029	.002	.000	.081	0.9	1.95	Slightly Peaty and contains Diatoms
Rivington	...	...	9.36	.286	.035	.000	.000	.035	1.6	3.25	Ditto
Green Lane Well	...	...	31.24	.035	.012	.000	.393	.405	3.3	16.71	Clear and Bright
Dudlow Lane "	...	...	17.48	.037	.017	.000	.393	.410	3.0	5.86	Ditto
Bootle ... ..	...	...	42.56	.042	.017	.000	.415	.432	4.2	25.72	Ditto
3rd Quarter—											
Filtered Rivington Water	1st Oct.	23rd Sept.	8.1	.323	.052	.004	.000	.055	1.5	3.51	Very Slightly Peaty, contains diatoms, very slightly Alkaline
Filtered Vyrnwy Water...	...	...	5.2	.313	.041	.003	.000	.044	0.9	2.21	Slightly Peaty, slightly Acid, but does not dissolve lead
Mixed Water ... ..	...	...	7.0	.246	.047	.003	.000	.049	1.2	2.86	Slightly Peaty, clear, neutral reaction
4th Quarter—											
Vyrnwy	24th Dec.	10th & 12th Dec.	60.4	.288	.029	.000	.000	.029	1.0	2.34	Peaty, neutral
Rivington	...	...	10.52	.283	.028	.002	.000	.029	1.7	4.86	Peaty and faintly Acid
Dudlow Lane Well	...	...	18.56	.035	.012	.000	.393	.405	3.0	6.14	Clear, colourless, slightly Alkaline
Green Lane	...	...	31.76	.035	.017	.000	.415	.432	3.4	17.13	Ditto
Tap in Dale Street	...	...	11.68	.296	.033	.000	.000	.033	1.5	4.86	Ditto

All the samples are of excellent quality.

1895.

LOCALITIES.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL.	
	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.	Un- der 5	5 up.
Brought Forward	4	6	9	10	9	7	6	3	4	6	5	8	9	3	8	7	4	3	5	5	6	4	5	75	69	= 144
Blackburn Grove	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	9
Boreland Street	2	2	...	...	...	1	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	1	...	6	4	10
Boston Street	2	1	1	1	...	...	...	...	...	...	...	1	1	...	...	1	1	2	...	...	1	4	1	8	8	16
Boswell Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	1	2
Bowles Street	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	1	...	1	...	2	3	...
Brasenose Road, with Leslie's Buildings	...	...	1	2	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	4	3	7
Breeze Hill	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bridge Street	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Brook Road	...	1	...	...	...	1	1	...	1	1	...	1	...	...	...	1	...	...	1	2	...	...	...	2	4	6
Brookhill Road	...	...	...	2	...	...	...	...	...	1	1	...	1	...	...	...	...	...	1	...	...	1	2	5	9	14
Browne Street	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	3	2	5
Browning Street	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...	3	3	3
Bullen's Terrace	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1
Bulwer Street	...	...	...	1	...	...	...	...	...	1	...	...	...	2	...	...	1	1	...	...	...	...	...	3	2	5
Burns Street	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	2	3
Byron Street	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	2	3
Cambridge Road	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Camden Street	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	3	4
Campbell Street	1	1	1	1	...	...	...	1	...	...	...	1	3	...	...	1	...	...	2	...	...	...	...	4	3	7
Canal Street and View	...	1	...	...	...	...	...	...	...	3	...	1	2	1	...	1	1	...	...	...	...	...	1	10	4	14
Carolina Street	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	1	2	3
Cedar Street	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	2	3
Chapel Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Chaucer Street	...	1	...	...	...	...	...	...	2	2	...	...	1	...	...	...	...	...	...	1	2	...	...	2	3	5
Chesnut Grove	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	2	6
Church View	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	1	3
Church St., Knowsley Wd.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carried forward	11	14	10	20	11	11	12	4	9	11	9	15	5	22	10	9	10	10	9	11	11	10	13	136	137	= 273

1895.

LOCALITIES.	JAN.		FEB.		MAR.		APRIL		MAY.		JUNE		JULY		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL.			
	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.	Un- der	5 up.		
Brought forward	11	14	10	20	11	11	12	4	9	11	9	15	22	5	10	10	9	10	11	11	10	13	16	136	137	273		
Church St., Stanley Wd.	...	1	...	...	1	1	...	2	...	...	1	...	...	...	...	...	...	1	...	...	...	...	1	2	6	8	
Clare Road	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	
Clifford Street	1	...	...	...	1	1	1	...	...	...	1	...	1	...	1	...	1	...	2	...	1	...	...	8	...	11	
Coleridge Street	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	1	1	2	
Concord Place	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Conway Street	1	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	3	5	...	8
Cornwall Street	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Cowper Street	...	...	...	...	2	...	1	...	...	...	...	...	7	...	...	1	...	...	...	...	...	...	...	11	1	...	12
Cranworth Street	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3
Creste Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cyprus Road	1	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	4	...	...	4
Davies Street	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	2	...	...	...	...	...	...	3	...	...	3
Delaware Street	...	...	...	...	...	...	...	...	...	...	...	2	1	...	2	...	...	...	...	...	...	...	...	3	2	...	5
Denbigh Street	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	1	6	2	...	8
Derby Rd., Stanley Wd.	...	1	1	2	3	1	1	1	1	2	...	1	1	2	...	...	1	...	2	1	...	...	2	9	13	...	22
Derby Road, Knowsley Ward	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Devon Street	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	2
Dorset Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1
Downing Road	1	...	1	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	3	3	...	6
Drake Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dryden Street	1	1	1	1	...	1	1	...	1	5	2	...	7
Duncan Street	...	1	1	1	...	1
Dundas Street	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2
Effingham Street	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	...	2	2	...	4
Elizabeth Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Elm Street	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	3	2	...	5
Emley Street	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
Carried forward	16	19	12	26	21	15	18	7	11	14	13	20	38	9	19	11	12	12	16	15	15	14	22	206	186	...	392	

LOCALITIES.	JAN		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL.				
	18	24	17	33	24	22	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	Un- der 5	5 up.	
Brought forward	1	1	1	1	1	2	2	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	3	484
Hood Street	1	1	1	1	1	2	2	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	3	6
Hooton Place	1	1	1	1	1	2	2	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	1	2
Hornby Road	1	1	1	1	1	2	2	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	1	2
Hornby Dock	1	1	1	1	1	2	2	20	11	12	17	17	22	51	12	24	13	16	14	17	21	16	19	15	29	247	237	1	2
Hospital (B. Borough)	2	6	3	5	1	5	2	5	6	7	7	7	6	2	4	1	6	1	8	1	7	3	6	6	17	70	70	87	87
Hospital (C. Infectious)	1	1	1	1	1	1	1	1	2	2	1	1	2	2	1	1	2	3	3	3	2	3	1	1	13	17	17	30	30
Howe Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	5	5	8	8
Irlam Road, Stanley Ward	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Irlam Road, Knowsley Ward	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	10	2	2	12	12
Ivanhoe Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jersey Street	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	4
Johnstone Street	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	7
Keats Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	7	4	11	11
Kebble Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	6	2
Kenilworth Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	6
Kent Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	4	4
Kings Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3
Keppel Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	3
Knowsley Road	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	3	2	3	2	2
Kirby Place	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
Laburnum Place	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lamb's Terrace	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Langdale Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Langton Dock Cottages	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Linacre Lane and Village	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lincoln Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	4
Carried forward	22	34	23	41	30	33	25	19	19	24	22	34	62	20	34	22	24	25	21	34	20	34	22	38	324	358		682	

1895.

LOCALITIES.	JAN.		FEB.		MAR.		APRIL		MAY.		JUNE		JULY		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL.		
	27	44	32	56	37	45	34	31	24	39	27	42	81	30	44	29	32	32	41	23	38	30	47	423	474	Un-5 der and 5 up.	
Brought forward	27	44	32	56	37	45	34	31	24	39	27	42	81	30	44	29	32	32	41	23	38	30	47	423	474	=897	
Sandfield Place	1	1	1	2	..
St. Alban's Road	1	1	1	..
St. Alban's Square
St. Catherine's Road	1	1	..
St. Edmund's Road	1	1	1	..
St. John's Road and Terrace	2	..	2	..	4	..	1	..	..	..	..	3	1	..	2	2	..	1	2	1	..	..	6	15	21	
Sandy Lane with Cross View and Place	1	..	2	..	..	..	..	2	1	..	..	..	..	..	1	..	1	1	..	..	..	..	..	3	1	4
Salisbury Road	1	..	1	1	..	..	..	..	..	3	2	5	
Scott Street	1	1	..	..	..	1	..	1	1	1	..	..	..	..	3	1	4	
Sea View Road	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	2	2	4	
Seaford Street ..	1	1	..	..	1	..	..	..	1	..	1	..	..	..	2	1	..	..	..	..	1	..	..	6	3	9
Sheridan Place with Lee's Terrace	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	2	3	
Shelley Street	1	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	3	1	4	
Sidney Road	1	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	3	..	
Smyna Road	1	1	1	1	2	..	1	1	..	6	3	9
Southey Street	1	1	1	1	1	1	1	..	4	..	3
Speke Place	3	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	3	2	5	
Spring Grove	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	3	2	5	
Stafford Street	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	2	3	
Stanley Road, Derby	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	2	3	
Stanley Ward	1	..	1	..	..	..	..	..	..	2	1	3	
Stanley Road, Knowsley	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2	1	3	
Stanley Road, Stanley	1	..	1	..	1	3	1	..	..	..	1	4	6	10	
Strand Road, Derby	1	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	1	4	6	10	
Strand Ward	1	3	1	..	..	..	..	2	1	2	..	1	..	..	1	..	..	1	1	..	10	5	15	
Strand Road, Knowsley	1	..	..	1	..	..	..	2	2	
Strand Ward	1	..	..	1	..	..	..	2	2	
Carried forward	29	47	36	62	45	54	35	35	27	41	31	45	93	32	55	34	40	39	34	46	27	43	33	50	485	528	1013

LOCALITIES.	JAN.		FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	Total.														
	Un- der 5	5 up.												Un- der 5	5 up.													
Brought forward	29	47	36	62	45	54	35	35	27	41	31	45	93	32	55	34	40	39	34	46	27	43	33	50	485	528	=1013	
Suffolk Street
Summersat
Surrey Street
Sussex Street
Talbot Street
Tattersall Place
Tennyson Street
Trinity Road
Tudno Street
Tudor Street
University Road
Vermont Street
Viola Street
Virginia Street
Wadham Road
Washington Street
Waterworks Street
Waverley Street
William Henry Street
with 1st & 2nd Streets
Windsor Place
Wordsworth Street
York Street
	30	51	36	64	49	57	36	35	29	42	38	46	100	33	59	36	43	40	36	50	31	46	36	52	523	552	=1075	

