

**[Report 1919] / Medical Officer of Health, Bolton County Borough.**

**Contributors**

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

**Publication/Creation**

1919

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County

Borough



of Bolton.

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ANNUAL REPORT

OF THE

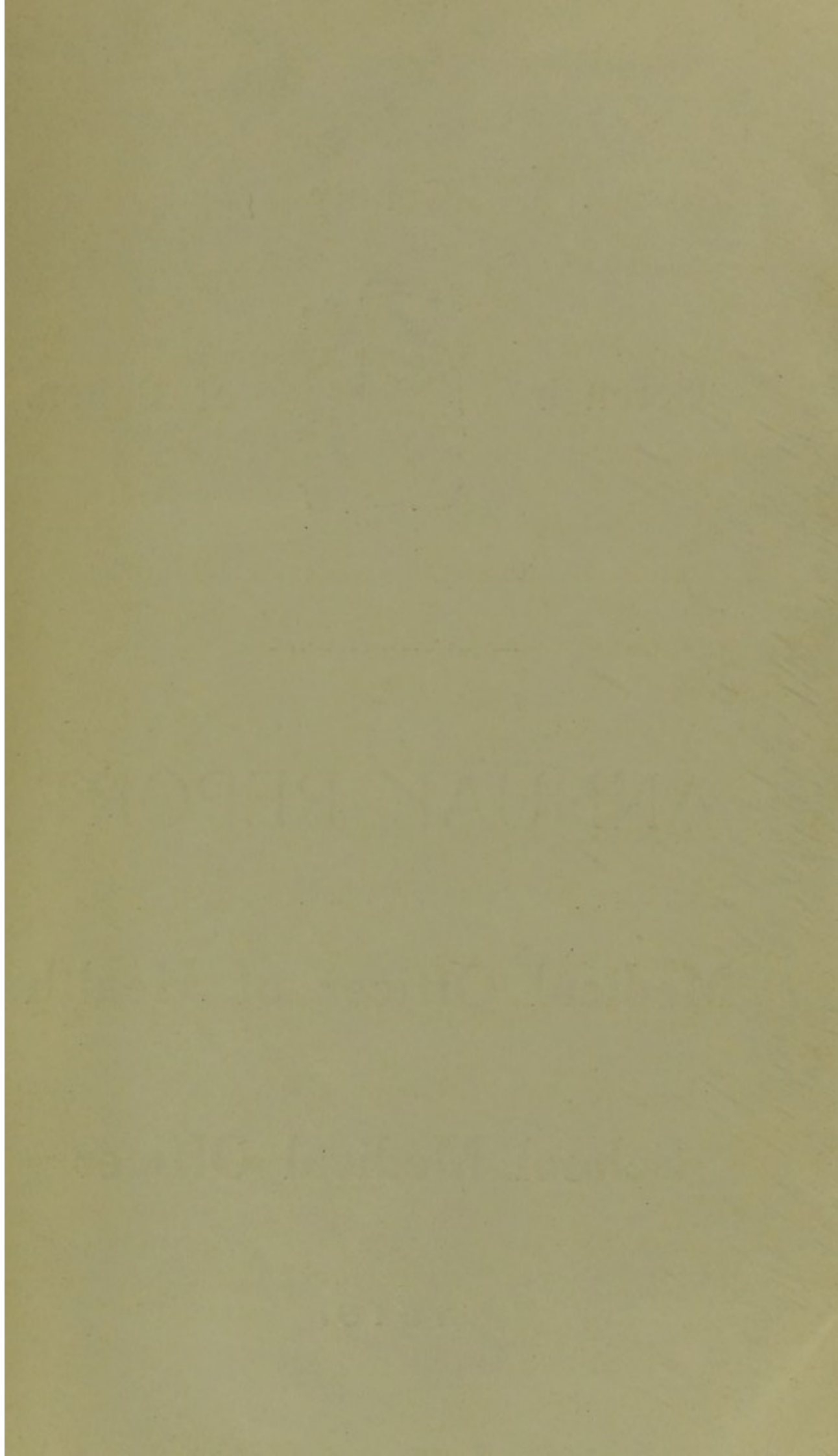
**Medical Officer of Health**

AND

**School Medical Officer**

FOR

**1919.**



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## COUNTY BOROUGH OF BOLTON.

### PUBLIC HEALTH COMMITTEE.

*The Mayor*—Ald. R. PARKINSON, J.P.

*Chairman*—Ald E. ASPINALL, J.P.

*Vice-Chairman*—Counc. P. KNOTT.

Ald, C. AINSWORTH, J.P.	Counc. A. E. HOLT, J.P.
„ SIR KNOWLES EDGE, J.P.	„ A. HILL.
„ E. MONKS, M.B.	„ S. LOMAX.
„ G. S. IKIN.	„ W. MARSHALL.
Counc. H. BOMMER.	„ W. RUSSELL.
„ J. H. EDGE.	„ L. SHAW.
„ W. HAYES.	„ F. STEEL.
„ WM. HEAPS, J.P.	„ J. H. THOMPSON, M.D.

### PUBLIC HEALTH & MEDICAL INSPECTION STAFF.

*Public Analyst and Bacteriologist*—

HARRY HURST, B.Sc. Lond. and Sheff., F.I.C.

*Veterinary and Chief Meat Inspector*—W. H. BRIDGE, M.R.C.V.S.

- District Inspectors*—
1. EDWARD OAKES, Cert. R. San. I.
  2. EVAN SUMNER, M. R. San. I. and  
Cert. for Food.
  3. THOMAS ORMROD, Cert. R. San. I.
  4. FRED S. ROSCOE, Cert. R. San. I.
  5. HAROLD THOMAS OGDEN, Cert. R. San. I.

*Chief Clerk and Inspector of Nuisances*—

HERBERT DANIELS, Cert. R. San. I.

*Chief Disinfector*—JOHN WILSON.

- Health Visitors*—
1. Miss S. A. Ramsden, C.M.B., Cert. R. San. I.
  2. Miss B. FYLES, Cert. R. San. I.
  3. Mrs. C. RAINBIRD, 3 years' Cert.
  4. Miss A. MARSH, 3 years' Cert.

- School Nurses*—
1. Miss G. DUNSTER, 3 years' Cert.
  2. Miss R. BODDINGTON, 3 years' Cert.

*Matron Borough Fever Hospital*—Miss ELIZ. BATEMAN.

*Assistant Medical Officer of Health and Assistant School Medical Officer*—  
JOHN McKEAGUE, L.R.C.P., L.R.C.S. Edin., D.P.H. Dublin.

*Tuberculosis Officer and Deputy Medical Officer of Health*—  
C. W. PAGET MOFFATT, M.A. Lond., M.B., B.C., D.P.H., Cantab.

*Medical Officer of Health and School Medical Officer*—  
JOHN E. GOULD, M.D., Lond., D.P.H., Cantab.

*Extract from the Memorandum to the Minister of Health*  
**on Preventive Medicine**

BY

SIR GEORGE NEWMAN, K.C.B.

(Chief Medical Officer of the Ministry of Health).

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**Local Medical Administration.**

"It is not, however, the Ministry of Health but the local authority in whose hands will rest the main business of the execution of a national health policy. It is in the local area, in direct touch with the patient, that the integration of medicine is to be achieved. It is there that early diagnosis and a prompt and adequate medical service is to find its fulfilment. It is there that the systematic and continuous attack is to be made, for there is the fighting line. It is there and not in Whitehall that the actual battle will be lost or won. Eugenics, maternity, child welfare, industrial hygiene, the problems of environment, the prevention of disease, the education of the public,—these matters can only be dealt with where the people are born and live and work and die. . . . "



THE UNIVERSITY OF CHICAGO

THE DIVISION OF THE PHYSICAL SCIENCES

PHYSICS DEPARTMENT

PHYSICS 309

LECTURE NOTES

BY

JOHN H. COLEMAN

1963-1964

CHICAGO, ILLINOIS

1964

CHICAGO, ILLINOIS

1964

CHICAGO, ILLINOIS

1964

CHICAGO, ILLINOIS

1964

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1964

CHICAGO, ILLINOIS

1964

**SECTION I.**

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**Vital and Mortal Statistics.**



SECTION I.

Vital and Social Statistics

# SUMMARY OF VITAL AND MORTAL STATISTICS. 1919.

Position	...	Lat. 53° 35' N., Lon. 2° 37' W
Elevation above sea level	...	230ft. to 1450ft.
Geological Formation: Boulder Clay and Sand over Coal Measures.		
Area in Acres	...	15283
Population (for birth-rate)	...	184863
"    (for death-rate)	...	177462
Density	...	11·6
New Houses Certified, 1919	...	2
Estimated No. of houses in the Borough (31st March, 1919)	...	43046
No. of houses where gross rental does not exceed £26 per annum (31st Mar. 1919)	...	40937
No. of new houses erected from Dec., 1909, to 31st March, 1919, where the gross rental does not exceed £26 per annum	...	2350
Rateable Value at 31st December, 1919	...	£889025
Births	...	3052
Birth-rate	...	16·5
Deaths	...	2652
Death-rate (corrected for Institutions)	...	14·9
Average Death-rate (1910-1919)	...	15·1
Infantile Mortality	...	86
Epidemic Death-rate (seven chief diseases)	...	·63
Diarrhœa and Enteritis (under 2 years), Death rate per 1000 Births	...	8·8
Phthisis Death-rate	...	·97
Other forms of Tuberculosis, Death-rate	...	·20
Respiratory Death-rate	...	3·38
Rainfall (Av. 1887-1918-42·68")	...	44·18"
96 Great Towns Birth-rate...	...	19·0
96 Great Towns Death-rate	...	13·8
96 Great Towns Infantile Mortality	...	93
96 Great Towns Diarrhœa and Enteritis (under 2 years) Death-rate per 1000 Births...	...	12·24
England and Wales Birth-rate	...	18·5
England and Wales Death-rate	...	13·8
England and Wales Infantile Mortality	...	89
England and Wales Diarrhœa and Enteritis (under 2 years), Death-rate per 1000 Births	...	9·59



## **Population and Area.**

The estimated civil population for 1919 was 177,462, the area 15,283 acres or 23·8 square miles, giving a density of 11·6 persons per acre.

## **Births.**

3,052 births were registered during the year, of which, 1,511 were males and 1,541 females. This, calculated on a population of 184,863, an estimated figure given by the Registrar General, is equal to a birth-rate of 16·5 which is slightly higher than last year.

The illegitimate births numbered 201 or 6·5 per cent. of the total births. 16 of the illegitimate births occurred in the Townleys Hospital,

144 stillbirths were notified during the year.

## **Deaths.**

During the year, 2,652 deaths were registered, 1,295 being males and 1,357 females. Corrections for all transferable deaths have been made, and in accordance with the suggestion of the Registrar General, all military deaths have been excluded.

The total number of non-residents who died in Bolton was 64, of whom, 55 died in the Infirmary. 214 persons died in institutions in the Borough.

336 Bolton residents died in various institutions and other places outside the Borough, of whom, 204 died in the Townleys Hospital, 78 in Lunatic Asylums, and 54 in various towns, chiefly in Lancashire.

The death-rate calculated on the civil population, was 14·9, and is below the average for the last ten years, which was 15·1. The epidemic of influenza accounted for 301 deaths which is equal to a death-rate of 1·13 per 1,000 of the population.

The death-rates varied in the wards from 8·8 in Deane-cum-Lostock to 18·9 in Exchange and East,

## POPULATIONS, BIRTH-RATES, DEATH-RATES, &amp;C., IN WARDS, 1919.

WARD.	Estimated Civil Population.	Birth- rate.	Death- rate.	Pul. Tub. Death- rate.	Infantile Mortality.
West ... ..	25177	18·4	14·8	·7	69
Halliwell ... ..	21656	16·2	14·6	1·1	104
Bradford ... ..	18863	16·7	16·1	1·3	87
Derby ... ..	18267	18·5	14·6	·9	87
East ... ..	9170	18·3	18·9	1·5	134
Rumworth ... ..	9103	19·1	13·7	1·2	100
Church ... ..	7944	11·8	18·2	·6	60
North ... ..	7120	16·0	14·1	·2	100
Exchange ... ..	4018	14·2	18·9	2·2	112
Old Borough ... ..	121318	17·1	15·5	1·0	91
Great Lever ... ..	12790	12·4	12·3	·5	104
Tonge ... ..	9741	16·1	16·0	1·2	67
Astley Bridge ... ..	8131	14·7	16·4	1·4	80
Smithills ... ..	7586	13·1	13·0	·5	49
Hulton ... ..	6534	19·5	12·5	·4	61
Deane-cum-Lostock ... ..	4313	18·7	8·8	—	60
Darcy Lever-cum-Brightmet ... ..	4071	17·2	14·2	·9	82
Heaton ... ..	2976	12·2	13·7	1·0	54
Added Area ... ..	56144	15·1	13·6	·8	73
Extended Borough ... ..	177462	16·5	14·9	·97	86



**DEATH-RATE AND INFANTILE MORTALITY  
IN CHIEF LANCASHIRE TOWNS.**

(Figures taken from the Annual Summary of the  
Registrar General)

1919.

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				Death-Rate (Calculated on Civil Population)	Infantile Mortality.
England and Wales	...	...		13·8	89
96 Great Towns	...	...		13·8	93

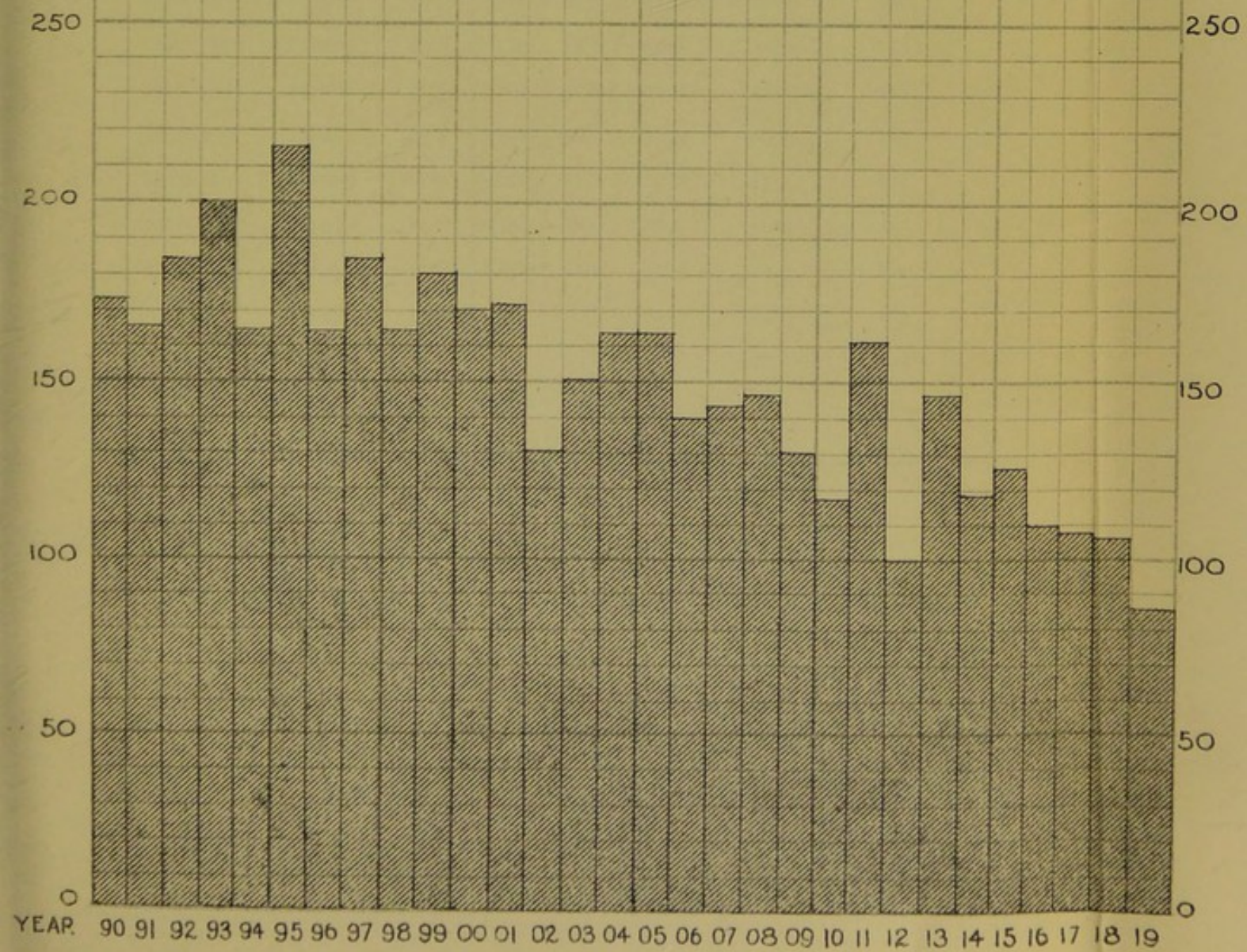
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Warrington	...	...	...	13·3	97
Manchester	...	...	...	14·0	95
Bootle ...	...	...	...	14·2	94
BOLTON	...	...	...	14·4	88
Preston ...	...	...	...	14·6	103
Salford ...	...	...	...	14·9	101
St. Helens	...	...	...	14·9	123
Burnley ...	...	...	...	15·1	119
Rochdale	...	...	...	15·2	120
Blackburn	...	...	...	15·6	93
Oldham ...	...	...	...	15·9	95
Wigan	...	...	...	16·1	117
Bury ...	...	...	...	16·3	90
Liverpool	...	...	...	16·8	107



# INFANTILE MORTALITY.

1890-1919.



FROM 3.17.44 PM

101-08



POPULATION, DENSITIES, BIRTH-RATES, DEATH-RATES AND  
INFANTILE MORTALITY IN PREVIOUS YEARS.

Year.	Population	Density	Births	Birth-rate	Deaths	Death-rate	Infantile Mortality
1773	5600	3.0					
1791-1800	14437	7.8					
1801-1830	28349	15.3					
*1831-1860	54463	29.5					
1861-1870	75999	41.2				29.4	
†1871-1880	91405	45.8	3841	40.6	2346	24.8	175
1881-1885	107507	45.5	3766	34.9	2270	21.0	169
1886-1890	112289	47.5	3725	33.1	2586	22.9	173
1891-1895	117286	49.6	3847	32.7	2610	22.2	185
‡1896-1900	138154	35.1	4246	30.9	2795	20.2	173
1901-1905	171065	11.1	4668	27.2	2968	17.3	157
1906-1910	177400	11.6	4555	25.6	2840	16.0	134
1911-1915	181075	11.8	4017	21.7	2759	15.2	129
1916	169081	11.0	3067	16.6	2419	14.3	104
1917	163411	10.6	2710	14.8	2477	15.1	107
1918	160619	10.5	2749	15.2	2804	17.4	105
1919	157462	11.6	3052	16.5	2652	14.9	86

\* Incorporation in 1838 with 48000 population and 1840 acres.

† Added in 1878, part of Rumworth with 163 acres and 3000 population and part of Halliwell with 358 acres and 10,000 population.

‡ In 1899 Borough extended by 12,922 acres and 38,000 added to the population.



## SUMMARY OF THE PRINCIPAL CAUSES OF DEATH, 1919,

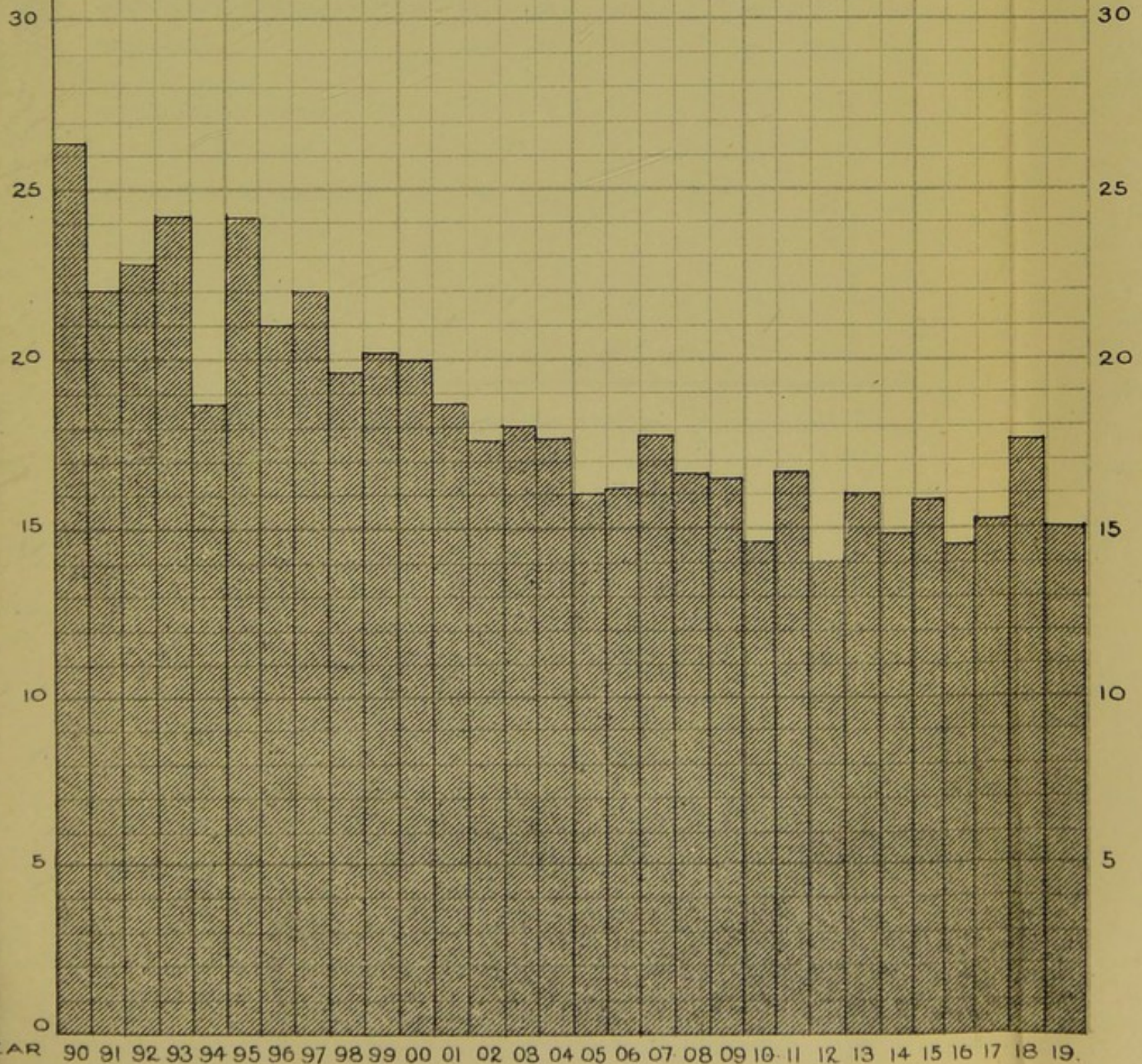
					No. of Deaths.	Per cent. of Total Deaths.
GENERAL DISEASES.						
(1)	Influenza	...	...	...	301	11.3
(2)	Pulmonary Tuberculosis	...	...	...	173	6.5
(3)	Other Tubercular	...	...	...	37	1.3
(4)	Cancer	...	...	...	176	6.6
(5)	Diphtheria	...	...	...	61	2.3
(6)	Other General Diseases	...	...	...	124	4.6
NERVOUS SYSTEM.						
(1)	Cerebral Hæmorrhage, Apoplexy	...	...	...	123	4.6
(2)	Infantile Convulsions	...	...	...	35	1.3
(3)	Other Nervous	...	...	...	91	3.4
CIRCULATORY SYSTEM.						
(1)	Organic Disease of Heart	...	...	...	180	6.7
(2)	Diseases of Arteries	...	...	...	55	2.0
(3)	Other Circulatory	...	...	...	52	1.9
RESPIRATORY SYSTEM.						
(1)	Bronchitis	...	...	...	354	13.3
(2)	Pneumonia	...	...	...	211	7.9
(3)	Other Respiratory	...	...	...	36	1.3
DIGESTIVE SYSTEM.						
(1)	Diarrhœa and Enteritis	...	...	...	49	1.8
(2)	Other Digestive	...	...	...	83	3.1
GENITO-URINARY SYSTEM.						
		...	...	...	92	3.4
DISEASES OF EARLY INFANCY.						
(1)	Premature Birth	...	...	...	61	2.3
(2)	Atrophy, Debility, &c.	...	...	...	55	2.0
OLD AGE...						
		...	...	...	162	6.1
VIOLENT CAUSES						
		...	...	...	96	3.6
MISCELLANEOUS CAUSES						
		...	...	...	45	1.6



# DEATH-RATES

1890-1919.

PER 1000 INHABITANTS





DEATH-RA

190-100

PER 100 MILES

## Infantile Mortality.

263 or 9·9 per cent. of the total deaths were those of children under one year of age, equal to an infantile mortality of 86 per 1000 births. The rates varied from 49 in Smithills to 134 in East Ward.

### CHIEF CAUSES OF DEATH UNDER ONE YEAR OF AGE.

	1914	1915	1916	1917	1918	Av. 1914 to 1918	1919
Total Deaths ... ..	485	446	320	291	291	366	263
Diarrhœa and Enteritis ... ..	137	94	31	17	29	61	23
Respiratory ... ..	45	86	77	42	57	61	57
Premature Births and Congenital Defects }	101	77	58	72	63	74	71
Atrophy and Debility ... ..	71	71	57	56	41	59	45
Convulsions and Meningitis ...	37	43	38	24	22	32	32
Tuberculous Diseases ... ..	9	8	7	10	6	8	2
Epidemic Diseases } (excluding Diarr.) }	37	29	12	33	34	29	7
All other Causes ... ..	48	38	40	37	39	40	26

The following figures shew the average quinquennial infant mortality in Bolton from 1876:—

Quinquennium.	Average rate.
1876-1880	171
1881-1885	169
1886-1890	173
1891-1895	185
1896-1900	173
1901-1905	157
1906-1910	134
1911-1915	128
1916	104
1917	107
1918	105
1919	86



## Mortality from Epidemic Diseases.

115 deaths were registered from the seven chief epidemic diseases. This is equal to a death-rate of '63.

### CAUSES OF DEATH FROM EPIDEMIC DISEASES.

				1915	1916	1917	1918	1919
Seven Chief Zymotics	Smallpox	...	...	—	—	—	—	—
	Scarlet Fever	...	...	4	9	8	2	4
	Diphtheria and Memb. Croup			45	20	22	26	61
	Enteric and Continued Fever			18	9	7	5	5
	Measles	...	...	58	9	134	1	18
	Whooping Cough	...	...	43	27	8	85	—
	Diarrhœa	...	...	74	37	28	20	27
	Erysipelas	...	...	6	4	2	1	3
	Puerperal Fever	...	...	1	4	1	2	1
	Cerebro-spinal Fever	...	...	4	—	—	2	2
	Influenza	...	...	27	18	19	367	301
	Pulmonary Tuberculosis	...	...	179	181	189	198	173

### DEATH-RATES FROM THE SEVEN EPIDEMIC DISEASES, AND PULMONARY TUBERCULOSIS, 1866-1919.

Year.	Small-pox.	Scarlet Fever.	Diphtheria and Memb. Croup	Fever.	Measles.	Whooping Cough.	Diarrhœa	Seven Chief Epidemic.	Pulmonary Tuberculosis.
Av. 1866-1870 ...	'06	1'40	'03	'68	'86	'55	1'88	5'7	—
Av. 1871-1880 ...	'11	1'10	'02	'50	'68	'71	1'74	4'7	—
Av. 1881-1890 ...	'019	'27	'07	'21	'73	—	1'19	—	1'67
Av. 1891-1900 ...	'005	'19	'07	'28	'62	'53	1'28	3'02	1'52
Av. 1901-1910 ...	'005	'21	'14	'18	'32	'28	'77	1'96	1'26
Av. 1911-1915 ...	—	'04	'20	'08	'32	'20	'71	1'60	'95
1916 ...	—	'05	'11	'05	'05	'15	'21	'65	1'07
1917 ...	—	'04	'13	'04	'82	'04	'17	1'26	1'15
1918 ...	—	'01	'16	'03	—	'53	'12	'86	1'23
1919 ...	—	'02	'34	'02	'10	—	'15	'63	'97

## Influenza.

301 deaths occurred from this disease during the year, equal to a death-rate of 1·13 per 1000 of the population; or 11·3 per cent of the total deaths.

The outbreak was continuous from 1918, reaching its highest intensity during the four weeks ending the 15th March. The highest mortality was experienced during the week ending the 1st March, when 77 deaths were recorded.

The disease was widely diffused and no district was immune as will be seen from a perusal of Table I. of the appendix.

The following tables give the number of deaths from Influenza for each week of the year and also the age and sex distribution.

### DEATHS IN WEEKS,

Week ending.	No.		Week ending.	No.
Jan. 4	2	...	Apl. 19	4
" 11	4	...	" 26	2
" 18	1	...	May 3	1
" 25	5	...	" 10	2
Feb. 1	3	...	" 17	1
" 8	2	...	" 24	2
" 15	14	...	June 7	1
" 22	57	...	" 14	1
Mar. 1	77	...	July 26	1
" 8	59	...	Sep. 13	1
" 15	24	...	Nov. 1	1
" 22	16	...	" 15	1
" 29	6	...	Dec. 6	1
Apl. 5	7	...	" 20	1
" 12	4	...		
				—
Total				301



# AGE AND SEX DISTRIBUTION OF INFLUENZA DEATHS, 1919.

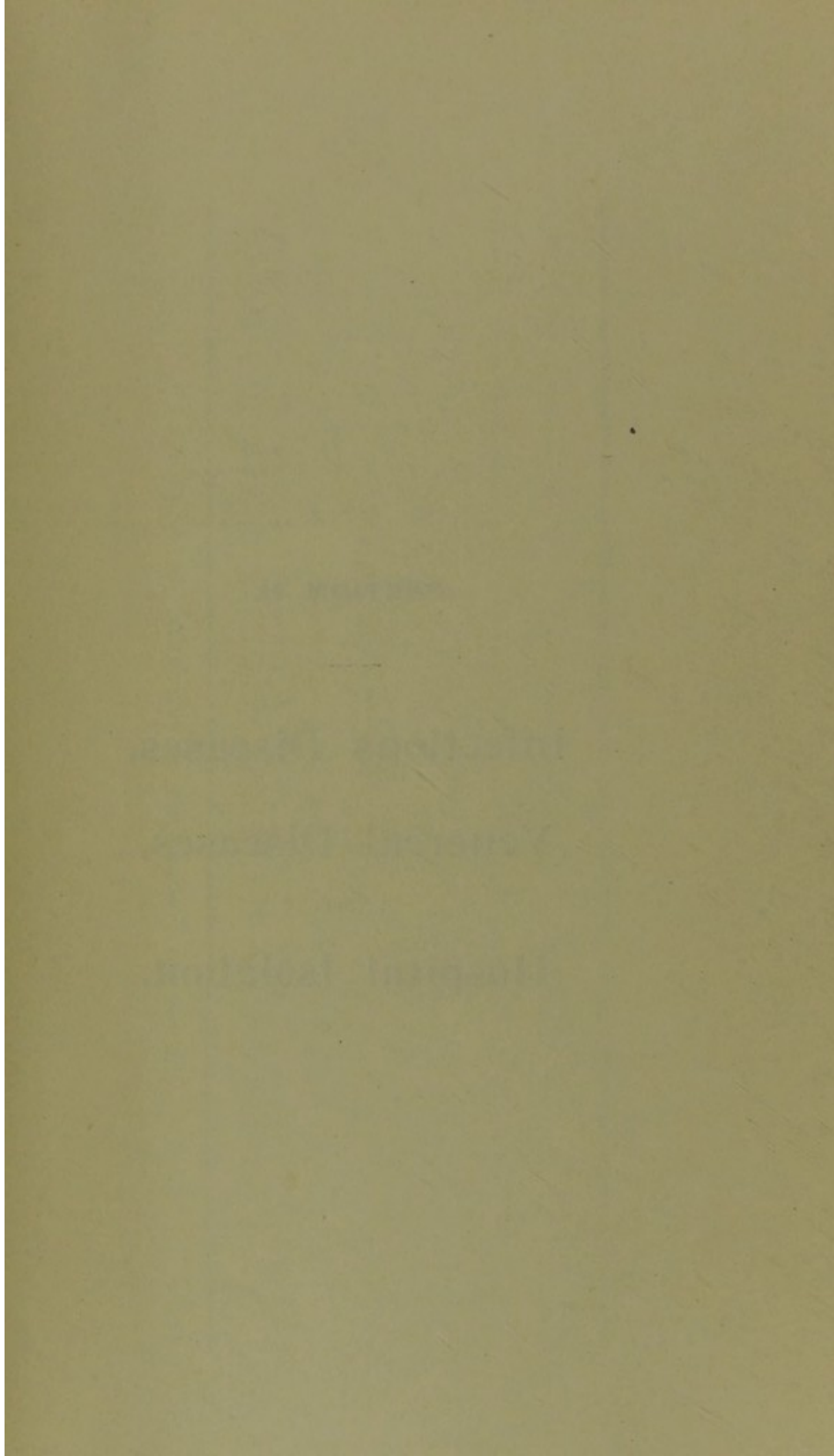
Sex.	Total.	0 to 1 yr	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 and Upwards.
Males ...	142	5	3	1	5	2	6	7	8	6	17	13	6	6	12	12	7	7	8	5	6
Females ...	159	...	...	2	1	2	5	6	7	11	23	14	11	6	12	13	10	12	13	6	5
Total ...	301	5	3	3	6	4	11	13	15	17	40	27	17	12	24	25	17	19	21	11	11



**SECTION II.**

---

**Infectious Diseases,  
Venereal Diseases,  
AND  
Hospital Isolation.**





### **Notification Rates per 1000 Population.**

COMPILED FROM THE REGISTRAR GENERAL'S QUARTERLY RETURNS.

---

			Total Rate.	Scarlet Fever.	Diphtheria.	Enteric Fever.
1.	Blackburn	...	1·77	1·10	·25	·03
2.	Burnley	...	2·87	1·13	·73	·07
3.	Rochdale	...	3·07	1·38	1·08	·05
4.	Bury	...	3·36	·49	2·17	·13
5.	Preston	...	3·80	1·47	1·62	·15
6.	BOLTON	...	3·87	1·70	1·55	·05
7.	Manchester	...	4·41	2·58	·85	·15
8.	Oldham	...	4·90	3·20	·88	·03
9.	Warrington	...	4·93	2·22	1·91	·10
10.	Salford	...	4·99	3·06	1·01	·11
11.	Wigan	...	5·64	3·95	·54	·24
12.	St. Helens	...	6·23	2·44	2·66	·07
13.	Liverpool	...	7·45	3·82	2·76	·05
14.	Bootle	...	8·02	5·05	2·43	·07

## DISTRIBUTION OF NOTIFIED DISEASES IN WARDS, 1919.

WARDS.				Smallpox.	Scarlet Fever.	Diphtheria and Memb. Croup.	Enteric.	Puerperal Fever.	Erysipelas.	Total.	Ophthalmia Neonatorum.	Pulmonary Tuberculosis.	Non-pul. Tuberculosis.	Measles.	Cerebro-spinal Meningitis.	Pneumonia.	Malaria.	Dysentery.
West	...	...	...	1	13	37	1	...	10	62	16	21	14	318	1	20	11	...
Halliwell	...	...	...	...	25	33	1	2	7	68	4	23	9	259	...	38	10	...
Bradford	...	...	...	...	50	15	...	...	16	81	3	22	13	214	...	19	12	1
Derby	...	...	...	2	52	17	...	1	11	83	6	12	12	112	...	14	15	...
East	...	...	...	...	7	23	...	...	3	33	3	18	5	105	...	5	10	...
Rumworth	...	...	...	...	34	7	2	...	8	51	1	14	3	48	1	27	4	...
Church	...	...	...	...	16	20	...	1	3	40	...	12	6	113	1	16	11	...
North	...	...	...	...	1	9	...	...	2	12	2	5	5	113	...	10	...	...
Exchange	...	...	...	...	7	2	...	...	1	10	...	17	3	34	...	8	1	...
Old Borough...				3	205	163	4	4	61	440	35	144	70	1316	3	157	74	1
Great Lever	...	...	...	...	17	5	2	1	4	29	...	8	3	185	...	13	6	...
Tonge	...	...	...	...	15	32	1	...	5	53	1	9	10	88	...	16	7	...
Astley Bridge	...	...	...	...	17	31	...	1	5	54	1	8	3	51	...	17	4	...
Smithills	...	...	...	...	8	12	...	...	2	22	1	2	2	35	...	8	4	...
Hulton	...	...	...	...	18	5	1	...	3	27	2	5	...	31	...	19	...	...
Deane-cum-Lostock	...	...	...	...	6	2	...	1	3	12	...	1	4	14	...	2	3	...
Darcy Lever-c-Brightmet	...	...	...	...	2	6	...	...	2	10	...	5	3	50	...	8	4	...
Heaton	...	...	...	...	1	3	1	...	2	7	1	3	...	10	...	...	...	...
Added Area ...				...	84	96	5	3	26	214	6	41	25	464	...	83	28	...
Extended Borough ...				3	289	259	9	7	87	654	41	185	95	1780	3	240	102	1



## INFECTIOUS DISEASES NOTIFIED FROM 1882 TO 1919.

Year. Average.	Smallpox.	Scarlet Fever.	Diph. and Mem. Cro'p	Enteric Fever.	Typhus.	Puerperal Fever.	Cholera.	Erysipelas	Total.	Rate per 1000 Pop'n	Pulmonary Tubercul's	Non-pul. Tubercul's	Ophthalmia Neonati'm	Measles.	Pneumonia Ac. Prim. & In	Malaria.	Dysentery.	Cerebro- spin. Men.
1882-1890	34	582	34	105	9	3	5	—	756	6.7	—	—	—	—	—	—	—	—
1891-1900.	6	642	57	182	2	8	1	1	898	6.9	—	—	—	—	—	—	—	—
1901-1910..	14	951	113	165	—	10	—	82	1336	7.4	170	—	—	—	—	—	—	—
1911-1915..	—	408	150	57	—	6	—	108	729	4.0	297	96	27	—	—	—	—	1
1916 ...	—	312	114	39	—	5	—	87	557	3.2	233	69	28	—	—	—	—	—
1917 ...	—	374	92	24	—	1	—	54	545	3.3	234	45	23	3416	—	—	—	1
1918 ...	—	224	105	24	—	2	—	46	401	2.4	198	86	16	343	—	—	—	2
1919 ...	3	289	259	9	—	7	—	87	654	3.6	185	95	41	1780	240	102	1	3

First Year Notification 1878. Isolation Hospital Established 1884.  
Borough Extended 1889.

## ENTERIC FEVER IN BOLTON, 1881-1919.

Year.	Cases.	Case-rate per 1,000 of Population.	Deaths.	Death-rate per 1,000 of Population.	Death-rate per cent. of Cases.
Av. 1881-1890 ...	103	.92	22	.19	22.3
Av. 1891-1895 ...	153	1.29	31	.26	20.4
Av. 1896-1900 ...	209	1.51	42	.25	20.1
Av. 1901-1905 ...	182	1.06	36	.21	20.1
Av. 1906-1910 ...	146	.82	29	.16	19.9
Av. 1911-1915 ...	57	.38	16	.08	28.1
1916 ...	39	.23	9	.05	23.0
1917 ...	24	.14	7	.04	29.1
1918 ...	24	.14	5	.03	20.8
1919 ...	9	.05	5	.02	55.5

### **Phthisis (Pulmonary Tuberculosis).**

173 deaths were registered from this disease, including those Bolton residents who died in institutions outside the Borough. It is equal to a death-rate of '97 per 1000 inhabitants.

The age and sex distribution are shewn below :—

Sex.	Total	Ages.							
		Under 5	5-15	15-25	25-35	35-45	45-55	55-65	65 and upwards
Males	94	..	..	15	13	22	21	16	7
Females	79	2	8	19	16	15	7	9	3
Total	173	2	8	34	29	37	28	25	10

The occupations of those who died were as follows :—

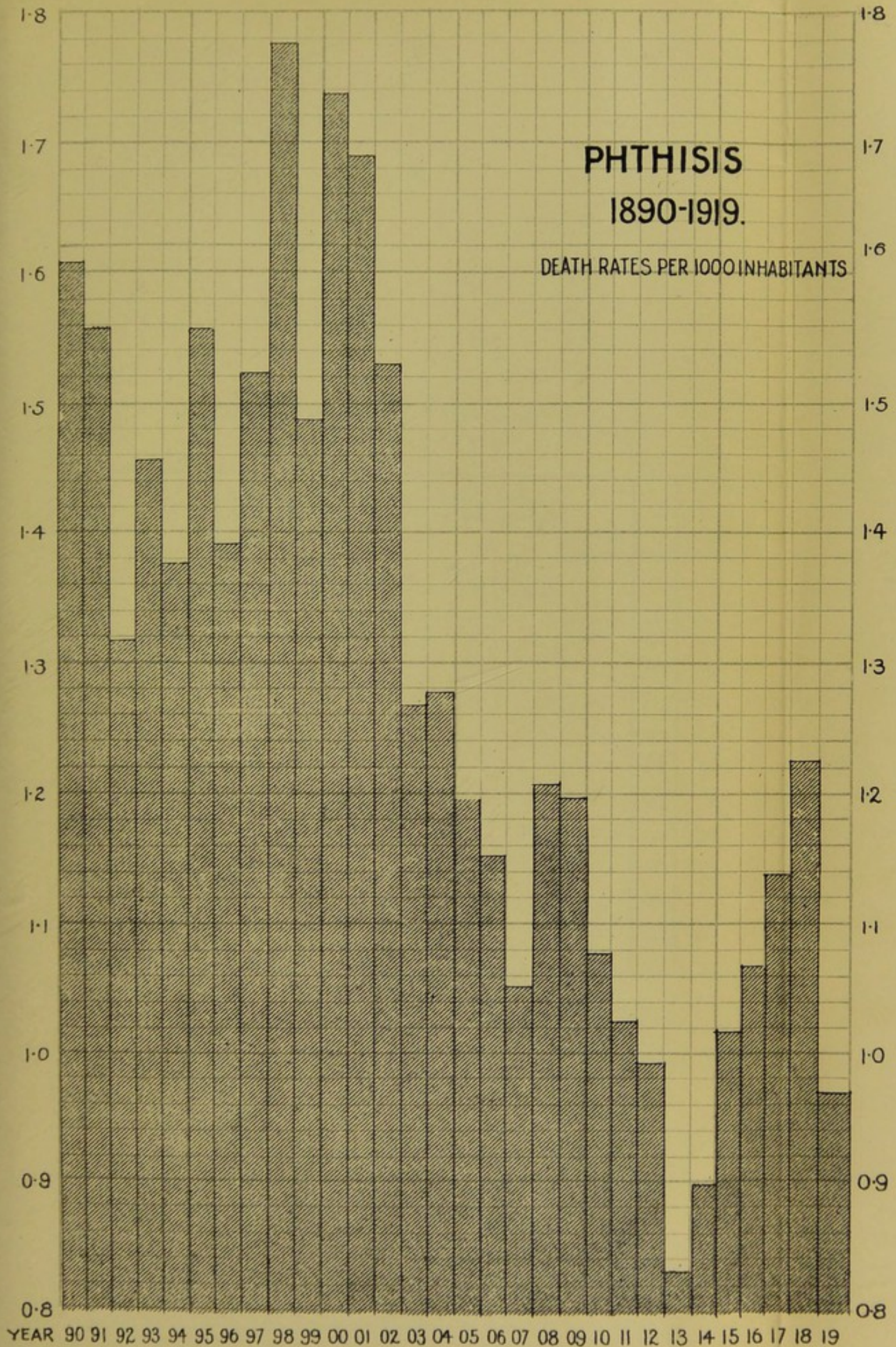
Weaving	...	...	...	...	4
Spinning	...	...	...	...	8
Other Cotton Operatives	...	...	...	...	18
Bleaching and Printing	...	...	...	...	3
Metals, Machines and Implements	...	...	...	...	17
Coal Mining	...	...	...	...	1
Building	...	...	...	...	6
Conveyance of men and goods	...	...	...	...	6
General Labourers	...	...	...	...	17
Food, Drink and Tobacco	...	...	...	...	6
Dress, etc.	...	...	...	...	8
Clerks	...	...	...	...	4
Household Work	...	...	...	...	42
School Children	...	...	...	...	4
Miscellaneous occupations	...	...	...	...	11
No occupation or occupation unknown	...	...	...	...	18



# PHTHISIS

1890-1919.

DEATH RATES PER 1000 INHABITANTS





12111149

1210251

1210251

DEATHS FROM PULMONARY TUBERCULOSIS IN BOLTON  
IN PREVIOUS YEARS.

Year.	Residents in Public Institutions out of Borough.			Public Institutions in Borough.		Private Houses.	Total	Death Rate.
	Work-house.	Lunatic Asylums	Others.	Residents.	Non-Residents.			
Av. 1901-05 ...	31	10·8	·4	1·2	·2	194	237	1·38
Av. 1906-10 ...	42	8·4	·2	1·2	...	151	203	1·13
1911 ...	39	6	2	...	...	140	187	1·03
1912 ...	37	9	3	...	...	133	182	·99
1913 ...	37	6	2	...	...	109	154	·83
1914 ...	32	5	3	12	...	115	167	·90
1915 ...	47	5	4	9	3	114	179	1·03
1916 ...	31	15	2	8	1	125	181	1·07
1917 ...	27	25	4	4	1	129	189	1·15
1918 ...	29	30	3	6	1	130	198	1·23
1919 ...	19	24	7	8	...	115	173	·97



## Tuberculosis.

### NOTIFICATION.

Total Pulmonary	...	...	185	
Total Non-pulmonary	...	...	95	
	Pulmonary.	Non-pulmonary.		Total.
Private Practitioners	... 152	... 39	...	191
School Medical Insp.	... 3	... —	...	3
Medical Officers of				
Institutions	... 30	... 56	...	86

### ADMISSIONS TO, AND DISCHARGES FROM INSTITUTIONS.

Institution.	Admissions.			Discharges.
Meathop ...	...	64	...	62
Wilkinson ...	...	38	...	41
Townleys Hospital ...	...	43	...	66

### EXAMINATIONS.

First Examinations	...	...	...	133
„ Consultations	...	...	...	165
Total First Examinations and Consultations...				298
Total Attendances	...	...	...	2625
1st. Applications	...	...	...	133
2nd. „	...	...	...	104
Insured	...	...	...	207
Uninsured	...	...	...	30
Discharged Soldiers	...	...	...	32 1st time
Pulmonary Tuberculosis	...	...	...	159
Non-pulmonary Tuberculosis	...	...	...	44
No Evidence	...	...	...	34

### DISPENSARY TREATMENT.

Under Treatment 1st Jan. 1919	...	...	36
-------------------------------	-----	-----	----

### NEW ADMISSIONS.

Pulmonary Tuberculosis	...	...	...	1
Non-pul. „	...	...	...	18
Attendances	...	...	...	1126
Domiciliary	...	...	...	28

### Treatment of Tuberculosis.

APPLICATIONS.			TREATMENT PROVIDED.		
Insured	...	207	Residential	...	183
Uninsured	...	30	Domiciliary	...	28
		—	Dispensary	...	1
Total	...	237	Cancelled	...	8
Pul. Tuberculosis	159		Declined	...	14
Non-pul.	„	44			
No evidence...	34				

78 per cent. of the applicants received treatment in residential institutions.

#### ACCOMMODATION AND NUMBER OF PERSONS ADMITTED FOR TREATMENT DURING THE YEAR 1919.

INSTITUTION.				Beds.	Treated.			Under Treatment 31st Dec. 1919.
					Total.	Ins.	Unins.	
Meathop Sanatorium	...	...	...	16	64	59	5	16
*Wilkinson	„	...	...	10	38	38	...	10
Heswall	„	...	...	6	6	...	6	6
Borough Hospital	...	...	...	24	95	72	23	19
Dispensary	...	...	...	...	57	24	33	30
Domiciliary	...	...	...	...	46	31	15	28

\* Excluding 28 uninsured persons admitted free.

#### ASSISTANCE GIVEN TO NECESSITOUS TUBERCULAR PATIENTS :—

1. Total number of patients assisted ... .. 61
2. Average time receiving assistance ... .. 3 months.
3. Amount of milk given ... .. 4726 qts.
4. Weekly food tickets given ... .. 13
5. Malt and Oil given ... .. 101 lbs.



## **Venereal Diseases.**

As mentioned in the 1918 report, the treatment of patients at the Venereal Disease Clinic at the Bolton Infirmary was transferred from the Honorary Medical Officers of that institution to the staff of the Public Health Department. An additional treatment Centre was opened at the Public Health Office on the 27th January, 1919, and on the 1st September, 1919, the whole of the work was transferred to the same office.

Clinics are now held at the following times :

Monday	...	7-0 p.m.,	} Males.
Tuesday	...	7-0 p.m.	
Wednesday	...	7-0 p.m.	
Thursday	...	7-0 p.m.	} Females.
Saturday	...	11-0 a.m.	

In addition, irrigation of cases of gonorrhœa is carried out at 11-0 a.m. on Wednesday for males, and at 11-0 a.m. on Tuesday and Thursday for females,

The examination of specimens is carried out under the direction of Prof. Dean of the Pathological Department of the University of Manchester.

Salvarsan, or its substitutes, is supplied free of charge to medical practitioners on certain conditions laid down by the Local Government Board, and specimens submitted by private practitioners in outfits obtained from the Public Health Department are examined free of cost to the practitioner.

The following tables shew the work carried out at the Centres established at the Infirmary and the Public Health Department.



RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE  
TREATMENT CENTRE AT BOLTON PUBLIC HEALTH OFFICES  
DURING THE YEAR ENDED THE 31ST DECEMBER, 1919.

	Syphilis.		Soft Chancre		Gonorrhœa.		Conditions other than Venereal.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. §Number of persons who, on the 1st January, 1919, were under treatment or observation for : (Transferred from Bolton Infirmary)	37	29	...	...	20	...	...	...	57	29
2. Number of persons dealt with during the year at or in connection with the out-patient Clinic <i>for the first time</i> and found to be suffering from :										
Syphilis only ...	230	152	...	...	...	...	...	...	230	152
Gonorrhœa only ...	...	...	...	...	268	16	...	...	268	16
§Syphilis and gonorrhœa ...	45	5	...	...	45	5	...	...	90	10
Conditions other than venereal ...	...	...	...	...	...	...	143	40	143	40
TOTAL—Item 2 ...	275	157	...	...	313	21	143	40	731	218
TOTAL—Items 1 and 2...	312	186	...	...	333	21	143	40	788	247
3. §Number of persons who ceased to attend the out-patient Clinic										
(a) before completing a course of treatment for ...	54	20	...	...	60	6	...	...	114	26
(b) after completion of a course of treatment, but before final tests as to cure of ...	5	4	...	...	3	1	...	...	8	5
4. Number of persons transferred to other Treatment Centres after treatment for ...	...	...	...	...	3	...	...	...	3	...
5. §Number of persons discharged from the out-patient Clinic after completion of treatment and observation for ...	5	1	...	...	18	...	115	40	138	41
6. §Number of persons who on the 1st January, 1920, were under treatment or observation for...	248	161	...	...	249	14	28	...	525	175
TOTAL—Items 3, 4, 5, and 6	312	186	...	...	333	21	143	40	788	247
7. Total attendances of all persons at the out-patient Clinic who were suffering from :—	2724	1867	...	...	2216	254	277	67	5217	2188
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from :—	7	10	...	...	18	...	...	...	25	10
9. Examinations of Pathological material :—										
	For Detection of									
	Spirochetes.			Gono-			Other			For
				cocci.			Organ-			Wasser-
							isms.			mann
(a) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre ...	...	...	...	...	6	...	...	...	...	...
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory ...	...	...	...	...	7	...	...	...	757	...

§ The number of persons suffering from two or more venereal diseases is entered under the heading of each disease in the vertical columns.



STATEMENT SHOWING THE SERVICES RENDERED AT THE PUBLIC HEALTH OFFICE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough.	Bolton C.B.	Lancs. C.C.	Bury C.B.	Cheshire C.C.	Black-pool C.B.	TOTAL.
A. Number of persons from each area dealt with during the year at or in connection with the out-patient Clinic <i>for the first time</i> and found to be suffering from:—						
† Syphilis ... ..	292	132	7	1	...	432
† Gonorrhœa ... ..	231	97	6	...	...	334
Conditions other than Venereal	140	40	2	...	1	183
TOTAL ...	663	269	15	1	1	949
B. Total number of attendances at the out-patient Clinic of all patients residing in each area ...	5304	1982	114	3	2	7405
C. Aggregate number of "In-patient days" of all patients residing in each area ...	28	7	...	...	...	35
D. Number of doses of Salvarsan substitutes given in the:— 1. Out-patient Clinic 2. In-patient Dept. to patients residing in each area.	1985 ...	800 ...	50 ...	1 ...	... ...	2835 ...
E. Give the names of Salvarsan substitutes used in the treatment of syphilis and the usual initial and final doses.	For Males.—'45 Novarsenobillon (initial). '6 N.A.B. final dose. For Females.—'3 N.A.B. (initial). '6 N.A.B. final dose.					
F. State the number of doses of Salvarsan substitutes usually given in a full course of treatment.	The full course of 7 doses, followed if necessary by Pot. Iod. and short courses of 4 Salvarsan injections.					
G. State in what proportion of cases, approximately, Salvarsan substitutes are used in the treatment of syphilis.	In practically all cases except such as shew intolerance of the drug.  In case of Syphilis, patients have been discharged when 3 blood tests at 3 monthly intervals without treatment have proved negative.					
H. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page.	In case of Gonorrhœa, patients are discharged when for 6 weeks they have been free from discharge and threads in urine.					

† If a person has been treated for both syphilis and gonorrhœa, he is included under both diseases, and similarly for other combinations of venereal diseases.



RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE  
TREATMENT CENTRE AT BOLTON INFIRMARY DURING THE  
YEAR ENDED THE 31ST DECEMBER, 1919.

	Syphilis.		Soft Chancre		Gonorrhoea.		Conditions other than Venereal.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. § Number of persons who, on the 1st January, 1919, were under treatment or observation for :	57	60	...	...	10	1	...	1	67	62
2. Number of persons dealt with during the year at or in connection with the out-patient Clinic <i>for the first time</i> and found to be suffering from :										
Syphilis only ...	89	48	...	...	...	...	...	...	89	48
Gonorrhoea only ...	...	...	...	...	4	...	...	...	4	...
§ Syphilis and gonorrhoea ...	3	...	...	...	3	...	...	...	6	...
Conditions other than venereal ...	...	...	...	...	...	...	48	4	48	4
TOTAL—Item 2 ...	92	48	...	...	7	...	48	4	147	52
TOTAL—Items 1 and 2...	149	108	...	...	17	1	48	5	214	114
3. § Number of persons who ceased to attend the out-patient Clinic										
(a) before completing a course of treatment for ...	48	31	...	...	6	...	...	...	54	31
(b) after completion of a course of treatment, but before final tests as to cure of ...	12	16	...	...	1	...	...	...	13	16
4. Number of persons transferred to other Treatment Centres after treatment for ...	1	...	...	...	...	...	...	...	1	...
5. § Number of persons discharged from the out-patient Clinic after completion of treatment and observation for ...	1	2	...	...	1	...	46	5	48	7
6. § Number of persons who on the 1st January, 1920, were under treatment or observation for...	87	59	...	...	9	1	2	...	98	60
TOTAL—Items 3, 4, 5, and 6	149	108	...	...	17	1	48	5	214	114
7. Total attendances of all persons at the out-patient Clinic who were suffering from :—	928	681	...	...	67	11	103	7	1098	699
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from :—	90	...	...	...	...	...	...	...	90	...
9. Examinations of Pathological material :—										
					For Detection of			For Wassermann Reaction		
					Spirochetes.	Gonococci.	Other Organisms.			
(a) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre ...	...	...	...	...	...	...	...	...		
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory ...	...	...	...	...	...	2	...	254		

§ The number of persons suffering from two or more venereal diseases is entered under the heading of each disease in the vertical columns.



STATEMENT SHOWING THE SERVICES RENDERED AT THE BOLTON INFIRMARY TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough.	Bolton C.B.	Lancs. C.C.	Bury C.B.	TOTAL.
A. Number of persons from each area dealt with during the year at or in connection with the out-patient Clinic <i>for the first time</i> and found to be suffering from:—				
† Syphilis ... ..	102	36	2	140
† Gonorrhœa ... ..	7	...	...	7
Conditions other than Venereal	31	21	...	52
TOTAL ...	140	57	2	199
B. Total number of attendances at the out-patient Clinic of all patients residing in each area ... ..	1375	411	11	1797
C. Aggregate number of "In-patient days" of all patients residing in each area ... ..	...	90	...	90
D. Number of doses of Salvarsan substitutes given in the:—				
1. Out-patient Clinic	720	220	7	947
2. In-patient Dept.	...	5	...	5
to patients residing in each area.				
E. Give the names of Salvarsan substitutes used in the treatment of syphilis and the usual initial and final doses.	For Males.—.45 Novarsenobillon (initial). .6 N.A.B. final dose. For Females.—.3 N.A.B. (initial). .6 N.A.B. final dose.			
F. State the number of doses of Salvarsan substitutes usually given in a full course of treatment.	The full course is 7 doses, followed if necessary by Pot. Iod. and short courses of 4 Salvarsan injections.			
G. State in what proportion of cases, approximately, Salvarsan substitutes are used in the treatment of syphilis.	In practically all cases except such as shew intolerance of the drug.  In cases of Syphilis, patients have been discharged when 3 blood tests at 3 monthly intervals without treatment have proved negative.			
H. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page.	In case of Gonorrhœa, patients are discharged when for 6 weeks they have been free from discharge and threads in urine.			

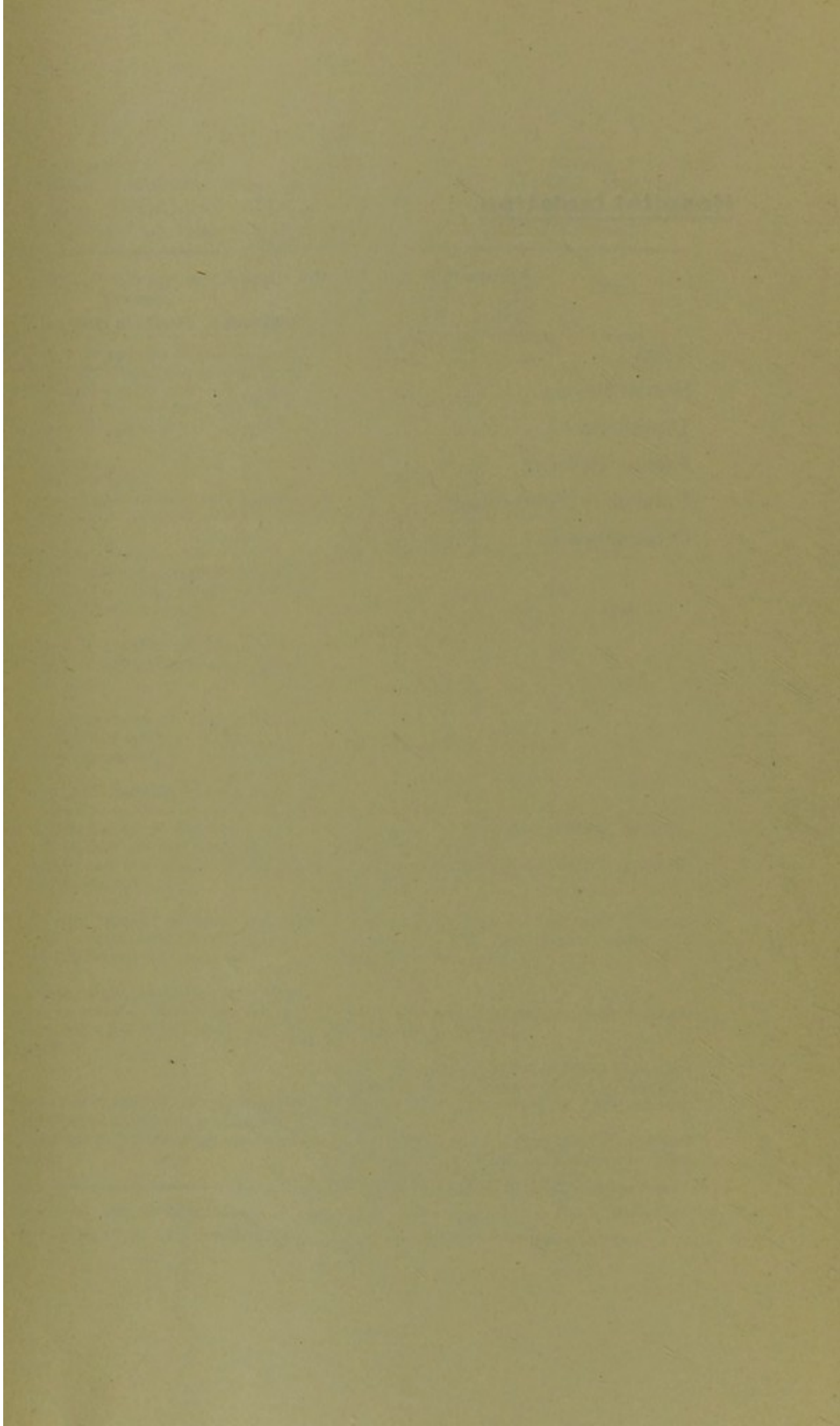
† If a person has been treated for both syphilis and gonorrhœa, he is included under both diseases, and similarly for other combinations of venereal diseases.



**Hospital Isolation.**

## Admissions and Deaths, 1919.

						Admissions.	Deaths in Hospital.
Total	...	...	...	...	...	337	36
Scarlet Fever	...	...	...	...	...	141	1
Diphtheria	...	...	...	...	...	81	21
Enteric Fever...	...	...	...	...	...	3	2
Pulmonary Tuberculosis	...	...	...	...	...	95	7
Other Diseases	...	...	...	...	...	17	5





**SECTION III.**

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1. Maternity and Child Welfare.
2. Control of Midwives.

SECTION OF

THE

AMERICAN AND CANADIAN

RAILROADS



## **Maternity and Child Welfare.**

### 1. BIRTHS:—

Registered	(1) Legitimate	2851,	(2) Illegitimate	201,	Total	3052
Notified	(1) Live Births	3123,	(2) Still Births	144,	Total	3267
	(1) By Midwives	2660,	(2) By Parents & Doctors	465,		
	(3) By Registrars	142,				

### 2. DEATHS OF CHILDREN UNDER 1 YEAR OF AGE:—

Number	(1) Legitimate	244,	(2) Illegitimate	19,	Total	263
Infant						
Mortality	(1) Legitimate	85,	(2) Illegitimate	94,	Total	86

### 3. VISITS BY HEALTH VISITORS.

Primary birth enquiries ...	...	...	...	2410
Visits to children, 1-5 years ...	...	...	...	1048
Primary visits to expectant mothers ...	...	...	...	251
Visits to Puerperal Fever Cases ...	...	...	...	7
Visits to Ophthalmia Cases ...	...	...	...	41
Death enquiries made ...	...	...	...	219
Visits to midwives' houses, Routine 57, Special 78, ...				135
Revisits to infants under 1 year ...	...	...	...	8322
Revisits to expectant mothers ...	...	...	...	914
Total visits ...	...	...	...	13347

### 4. METHOD OF FEEDING.

			Living infants visited.	Infants who died under 1 year.
1. Breast fed only	...	...	1492	45
2. Breast fed partly	...	...	523	71
3. Artificially fed	...	...	278	103

### 5. OTHER CONDITIONS.

The following conditions were found amongst newly born children visited by the Health Visitors.

Healthy	...	...	...	...	...	1877
Delicate	...	...	...	...	...	323
Premature	...	...	...	...	...	93

## 6. OTHER INFORMATION.

Nuisances found and referred to M.O.H.	...	61
Cases referred to N.S.P.C.C.	... ..	15
Leaflets distributed	... ..	2410
Houses found to be clean	... ..	2094
Houses found to be dirty	... ..	289
No. of mothers returning to work within three months of birth of child	... ..	280

## 7. ASSISTANCE GIVEN TO NECESSITOUS MOTHERS.

No. of Persons.			Assistance Given.
632	...	...	New Milk.
108	...	...	Dried Milk.
8	...	...	Nestles Milk.
263	...	...	Malt and Oil and Virol.
40	...	...	Food Tickets.
23	...	...	Home Helps on 319 days.
<hr/> 1074			

## 8. AMOUNT OF FOOD DISTRIBUTED.

New Milk	...	...	...	11,080 <del>8208</del> qts.
Dried Milk	...	...	...	1602 lbs.
Nestle's Milk	...	...	...	336 tins.
Malt and Oil	...	...	...	852 lbs.
Virol	...	...	...	420 lbs.
Food Tickets	...	...	...	104 tickets.

## 9. CLINICS.

Clinics are now held at seven School for Mothers Centres, and these are attended by the two Public Health Medical Officers and three part time Medical Officers.

There are also two Centres under the control of the R.C. Women's League attended by two medical practitioners.

The clinics are held at 3 o'clock in the afternoon at the following places on the days stated.

## MONDAY.

The Friends' School Room, Tipping Street.  
St. Matthew's Mission Room, James Terrace.



## TUESDAY.

Halliwell Road Free Church.

Victoria Wesleyan School, Grecian Street.

## WEDNESDAY.

Girls' Club, Kensington Street.

## THURSDAY.

Derby Street Council School.

Daubhill Congregational School.

The numbers of new admissions and consultations during 1919 at the Municipal Clinics held at the School for Mothers Centres have been as follows:—

Total New Admissions	...	...	930
„ Consultations	...	...	5275
Average Attendance per Clinics	...	...	51

**Control of Midwives.**

57 notifications of their intention to practice within the Borough were received from Midwives during the year.

		Trained.	Untrained.	Total.
No. of Midwives	... ..	37	20	57
No. of cases attended	... ..	1902	643	2545
Av. number of cases per midwife		51	32	45
No. of calls for medical aid	... ..	148	43	191
Per cent. of cases in which medical aid was sought	... ..	7.7%	6.6%	7.5%

The following 343 notifications were received from the midwives in accordance with the regulations of the Central Midwives Board:—

Pregnancy, abortion or miscarriage	... ..	3
Malpresentation	... ..	27
Delayed or obstructed labour	... ..	50
Ruptured perinæum	... ..	14
Retained placenta or membranes	... ..	13
Hæmorrhage, ante and post natal	... ..	6
Convulsions and Eclampsia	... ..	2
Rise of temperature	... ..	10

Placenta Prævia	...	...	...	...	8
Other causes	...	...	...	...	7
New-born child	...	...	...	...	13
Ophthalmia	...	...	...	...	38
Death of child	...	...	...	...	8
Laying out of dead body	...	...	...	...	3
Stillbirths	...	...	...	...	141

The midwives' houses have been inspected, and I have examined the case books, instruments, temperature and pulse records, and appliances of each midwife during the year. 2545 cases out of a total 3267 births were attended by the midwives.



**SECTION IV.**

**Animals and Food Inspection.**

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**Public Analyst's Report.**

SECTION 12  
ANIMALS AND FOOD INSPECTION  
FEDERAL ANIMALS REPORT



## **Report of Chief Food Inspector and Inspectors under the Sale of Food and Drugs Acts.**

### 1.—GENERAL INSPECTIONS.

Beasts...	...	...	...	...	...	5723
Calves	...	...	...	...	...	1812
Sheep...	...	...	...	...	...	16820
Swine...	...	...	...	...	...	5940
Store Cattle	...	...	...	...	...	1620
Slaughter-houses	...	...	...	...	...	778
Railway Sidings	...	...	...	...	...	252
Markets and Fairs	...	...	...	...	...	886
Farms	...	...	...	...	...	154
Shops...	...	...	...	...	...	786

### 2.—CARCASSES FOUND TO BE AFFECTED WITH OR SUSPECTED OF DISEASE.

Diseases or Defects.	Examined.							Action Taken.			Total.
	Cows.	Bulls.	Heifers.	Bullocks.	Calves.	Sheep.	Swine.	Whole Carcases Destroyed.	Parts and Organs Destroyed.	Carcases Passed.	
Tuberculosis	534	5	25	2	1	...	3	251	319	...	570
Hepatitis ...	5	...	...	...	...	...	...	...	5	...	5
Nephritis ...	2	...	...	...	...	...	...	1	1	...	2
Pericarditis	1	...	...	...	...	...	...	...	1	...	1
Traumatism	15	...	...	...	...	2	1	6	12	...	18
Moribund ...	17	...	...	...	3	11	2	33	...	...	33
Sto'achic Im.	7	...	1	...	...	...	...	...	3	5	8
Mastitis ...	11	...	...	...	...	...	...	...	11	...	11
Fractures ...	5	1	1	1	...	...	2	...	9	1	10
Immature ...	...	...	...	...	46	...	2	48	...	...	48
Echinococcus Cysts ...	...	...	...	...	...	1	...	1	...	...	1
Parturition	2	...	...	...	...	...	...	1	1	...	2
Peritonitis ...	1	...	...	...	...	...	...	1	...	...	1
Jaundice ...	...	...	...	...	4	...	2	6	...	...	6
Paralysis ...	1	...	...	...	...	...	...	...	...	1	1
Blackquarter	...	...	1	...	...	...	...	1	...	...	1
D'composit'n	...	...	...	...	...	52	...	52	...	...	52
Dropsy ...	5	1	...	...	5	4	...	15	...	...	15
Emaciation	18	...	4	...	1	8	...	31	...	...	31
Septicæmia	...	...	...	...	1	...	...	1	...	...	1
Emphysema	1	...	...	...	...	...	...	1	...	...	1
Miscell'neo's	19	1	7	...	...	...	...	...	22	5	27
<b>Total</b> ...	<b>644</b>	<b>8</b>	<b>39</b>	<b>3</b>	<b>61</b>	<b>78</b>	<b>12</b>	<b>449</b>	<b>384</b>	<b>12</b>	<b>845</b>

## 3.—FOOD DESTROYED.

	No.	Tons.	Cwts.	Qrs.	lbs.
Beef ... ..	—	1	2	—	4
Fish ... ..	—	11	17	—	—
Rabbits ... ..	2624	—	—	—	—
Fowl ... ..	226	—	—	—	—
Eggs ... ..	2050	—	—	—	—
Fruit ... ..	—	20	10	2	18
Vegetables ... ..	—	2	12	3	2
Bacon ... ..	—	—	—	1	4
Butter ... ..	—	—	—	—	6

## 4.—FARM VISITATION.

Farm Visits ... ..	...	...	...	...	154
Cows Examined ... ..	...	...	...	...	2510
Abnormal Udders ... ..	...	...	...	...	11
Milk examined for tubercle bacilli	...	...	...	...	4
Tubercle bacilli found	...	...	...	...	—
Number of Farms not Dairying	...	...	...	...	28

## 5.—PARASITIC MANGE.

28 cases of suspected mange have been notified. Of these, 18 were found to be affected, and 10 were found to be free from the disease. 7 of the affected animals were destroyed.

## 6.—FOOD AND DRUGS, SAMPLES PURCHASED.

	Total	Adulterated.	% Adulterated.
Milk ... ..	172	26	15·1
Butter ... ..	25	1	4·0
Margarine ... ..	17	—	—
Miscellaneous ... ..	103	6	5·8
	<hr/> 317	<hr/> 33	<hr/> 10·4



## ADMINISTRATIVE RETURN OF ACTION TAKEN.

Article.	Nature of Adulteration.		Result.
Milk ... ..	2.3 %	added water	No action
Milk ... ..	3.3 %	" "	Informal sample
Milk ... ..	3.4 %	" "	No action
Milk ... ..	5.8 %	" "	Fined £10 and 10/6 costs
Milk ... ..	6.7 %	" "	Informal sample
Milk ... ..	6.7 %	" "	Informal sample
Milk ... ..	6.7 %	" "	Informal sample
Milk ... ..	7.65 %	" "	No action. The sample shewed 11.15 % milk fat
Milk ... ..	8.7 %	" "	Fined £5 & £1. 1. 0 costs
Milk ... ..	9.3 %	" "	Fined £5
Milk ... ..	14.7 %	" "	Informal sample
Milk ... ..	5.0 %	deficient in fat	Warning letter sent
Milk ... ..	5.0 %	" "	No action
Milk ... ..	7.0 %	" "	Case dismissed
Milk ... ..	7.7 %	" "	Appeal to cow
Milk ... ..	8.0 %	" "	Fined £20 and 10/6 costs
Milk ... ..	8.3 %	" "	Appeal to cow
Milk ... ..	8.7 %	" "	Fined £10 and 10/6 costs
Milk ... ..	8.7 %	" "	Case dismissed
Milk ... ..	12.0 %	" "	No action as a result of appeal to cow
Milk ... ..	12.7 %	" "	Fined £15 and 10/6 costs
Milk ... ..	13.3 %	" "	No action as a result of appeal to cow
Milk ... ..	14.0 %	" "	Fined £5 and 10/6 costs
Milk ... ..	17.3 %	" "	Appeal to cow
Milk ... ..	2.0 %	" " and 12.2 %	
		added water	Fined £5 and 10/6 costs
Skimmed Milk	7.0 %	added water	Fined £5 and 10/6 costs
Butter ... ..	1.1 %	excess of water	No action
Sausage ... ..	23.8 %	grains of boric acid per lb.	No action
Vinegar ... ..	2.75 %	deficient in acetic acid	No action
Baking Powder	6.55 %	calcium sulphate	No action
Baking Powder	1.75	co <sup>2</sup> evolved with water	Informal sample
Baking Powder	.70	co <sup>2</sup> " "	Informal sample
Camphorated Oil ...	21.60 %	camphor and 78.40 % Mineral Oil	Informal sample

## OFFENCES OTHER THAN ADULTERATION.

Nil.

Total Fines	...	£80 0 0
Total Costs	...	£ 4. 14. 6

## **Report of Public Analyst & Bacteriologist, 1919.**

HARRY HURST, B. Sc., F. I. C.

### SUMMARY.

Food and Drugs ... ..	317
Bacteriological Examinations for the M.O.H. ...	1000
Bacteriological Examinations for the Vety. Surg.	3
Miscellaneous Analyses ... ..	48
Water Analyses ... ..	579
Gas Examinations ... ..	292
<b>TOTAL ...</b>	<b>2239</b>

### DETAILS OF FOOD AND DRUGS.

	Total.	Genuine.	Adulterated.	Per cent. Adulterated.
Milk ... ..	172	146	26	15·1
Cream... ..	...	...	...	...
Butter... ..	25	24	1	4·0
Cheese ... ..	...	...	...	...
Margarine ...	17	17	...	...
Tea ... ..	2	2	...	...
Coffee ... ..	9	9	...	...
Miscellaneous	92	86	6	6·5
<b>TOTAL ...</b>	<b>317</b>	<b>284</b>	<b>33</b>	<b>10·41</b>

### BACTERIOLOGICAL EXAMINATIONS.

#### FOR M.O.H.

	Total.	Positive.	Negative.	Doubtful.
Tuberculosis ...	821	136	684	1
Diphtheria ...	158	32	118	8
Enteric Fever ...	13	4	8	1
Miscellaneous ...	8	2	6	...

#### FOR VETERINARY SURGEON.

	Total.	Positive.	Negative.	Doubtful.
Milk for Tuberculosis	3	...	3	...



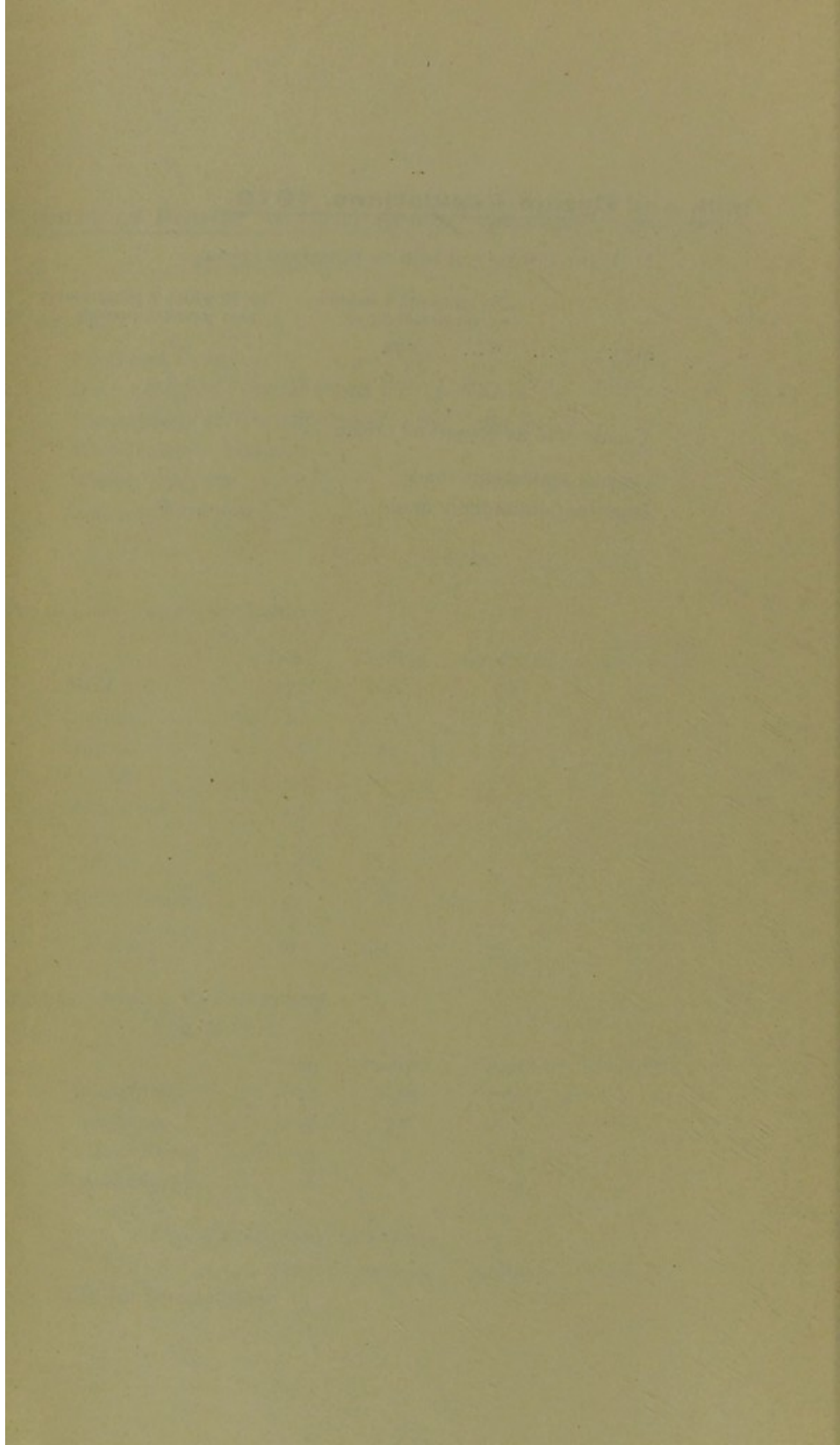
# **Milk and Cream Regulations, 1912.**

## (1) Milk and Cream not sold as preserved cream.

		No. of samples examd. for preservative.	No. in which a preservative was reported present.
Milk	...	172	0
Cream	...	0	0

## (2) Cream sold as preserved cream.

Correct statements made	...	...	0
Incorrect statements made	...	...	0

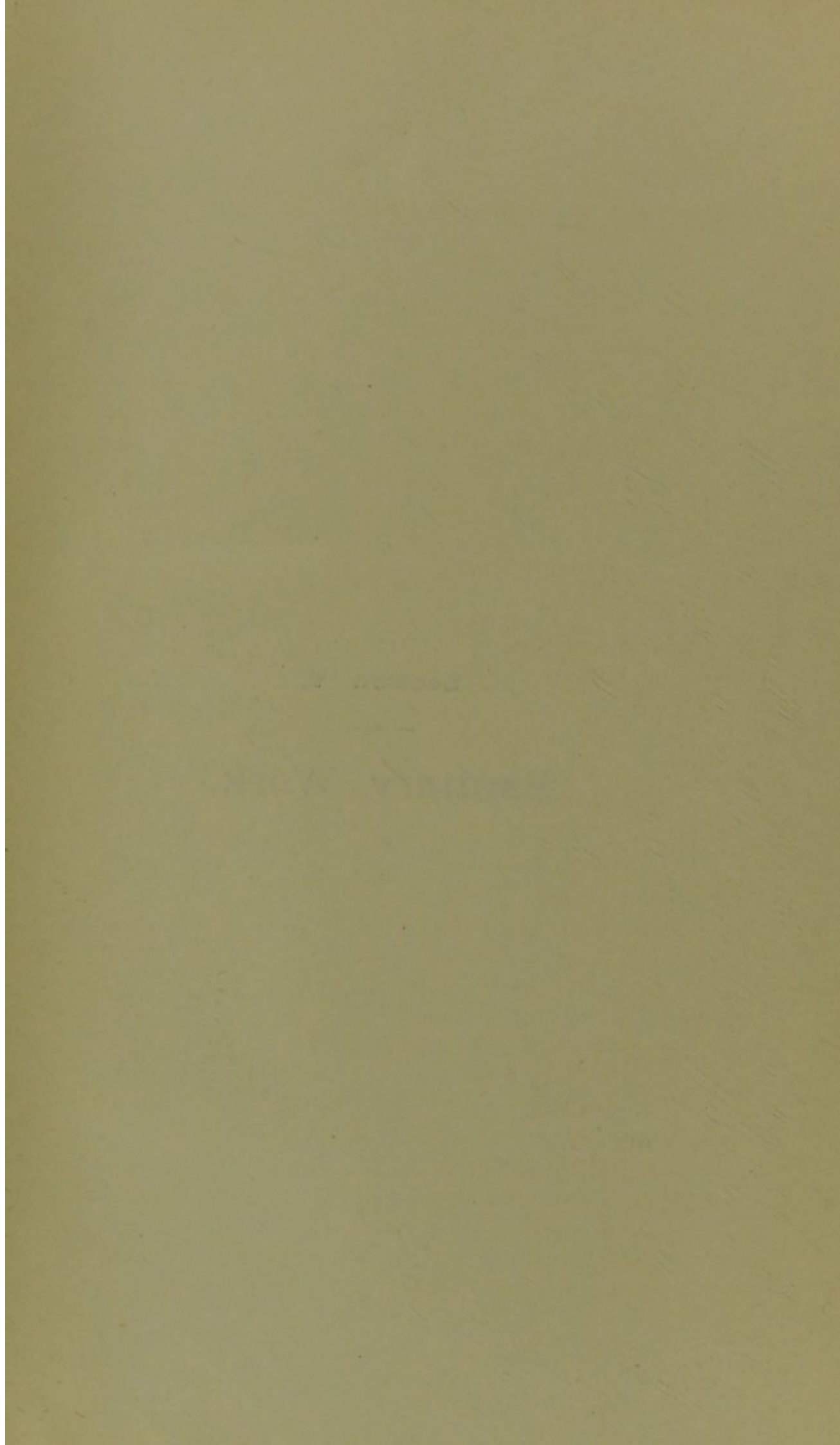




**Section V.**

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**Sanitary Work.**





## **Abstract of Sanitary Work.**

### PLACES UNDER INSPECTION,

Common Lodging-houses	...	...	...	...	...	45
Houses Let-in Lodgings	...	...	...	...	...	48
Factories	...	...	...	...	...	373
Factory Chimneys	...	...	...	...	...	243
Workshops and Workplaces	...	...	...	...	...	747
Bakehouses	...	...	...	...	...	252
Outworkers' Premises	...	...	...	...	...	35
Offensive Trades	...	...	...	...	...	27
Slaughterhouses	...	...	...	...	...	45
Cowkeepers	...	...	...	...	...	157
Cowsheds	...	...	...	...	...	331
Milkshops	...	...	...	...	...	473
Public Sanitary Conveniences	...	...	...	...	...	17
Travelling Vans	...	...	...	...	...	87

### ABSTRACT OF WORK DONE DURING 1919.

Complaints from Public	...	...	...	...	...	147
Complaints from Factory Inspector	...	...	...	...	...	40
Reports to Factory Inspector on action taken	...	...	...	...	...	40
Nuisances Reported	...	...	...	...	...	1910
Letters Written or Verbal Notices	...	...	...	...	...	723
Informal Notices Issued	...	...	...	...	...	541
Legal Notices Issued	...	...	...	...	...	145
Smoke Observations	...	...	...	...	...	308
Houses Fumigated	...	...	...	...	...	633
Articles Disinfected	...	...	...	...	...	4791
Articles Destroyed	...	...	...	...	...	165
Houses, etc., Limewashed	...	...	...	...	...	120
House Repairs	...	...	...	...	...	610
Overcrowding Abated	...	...	...	...	...	3
Houses Closed (2 on Closing Order)	...	...	...	...	...	7
Privy Ashpits converted into Water Closets	...	...	...	...	...	29
Drains Reconstructed	...	...	...	...	...	52
Yards Repaired or Flagged	...	...	...	...	...	74
Samples of Food, etc., Purchased	...	...	...	...	...	317
Samples Adulterated or other Offences	...	...	...	...	...	33
Adulteration Prosecutions	...	...	...	...	...	11

## **Housing of the Working Classes.**

During 1919 there were 2 houses demolished as unfit for human habitation; 7 closed (2 on Closing Order) and 2 were made fit.

The number of back-to-back and single houses has now been reduced to 1581, as compared with 2558 in 1901.

From 1874 to 1895 there were 538 demolitions of insanitary houses, from 1896 to 1919 there have been 1095 demolitions, 522 houses closed, 627 made fit, and 167 improved.

The amount expended, including the money borrowed for reconstruction schemes, was from 1874 to 1895 a sum of £8,412, and from 1896 to 1917 a sum of £36,768, making a total of £45,180.

The following report on the Housing Conditions in Bolton was prepared and presented to the Housing Commissioner on the 6th May, 1919.

## **Population.**

The population of Bolton at the present time is somewhat difficult to estimate, but after careful consideration of the statistics available for births, deaths, and ration cards, I am of the opinion that 179,824 is as accurate an estimate as can be obtained. This figure includes soldiers in the Army, and is approximately the same as the Registrar-General's Estimate, viz.: 179,968. It will be noticed, also, that the population of Bolton at the present time is slightly less than that revealed by the census of 1911, viz.: 180,851.

## **Houses.**

The number of certified dwellings in the Borough from returns made by the Rate Department is 43,466, making an average number of persons to the house of 4.1, as compared with 4.4 in 1911. Of the 40,550 houses at the census in 1911, 27,224 or 67% had 1 to 4 rooms, 8,958 or 22% had 5 rooms, and 4,368 or 11% had 6 or more rooms. There is no reason to doubt that this proportion still holds good.

The number of working class dwellings containing 1 to 5 rooms at the last census was 36,182, with a population of 155,991, averaging 4.3 per house. Comparative figures for 1901 are not available, but



there were 21,524 houses containing 1 to 4 rooms at that time, compared with 27,224 in 1911.

The percentage of tenements at the census in 1911 having two rooms or less, was 3·8, and the percentage of the population living more than 2 in a room was 7·7.

The following table, taken from the census 1911, shews the number of houses having less than 5 rooms, and the number of persons living in them. It includes about 100 houses-let-in-lodgings and common lodgings-houses, in which either 1, 2, or more rooms are let off to various families.

TENEMENTS WITH LESS THAN FIVE ROOMS AND THE NUMBER OF PERSONS LIVING IN THEM, 1911.

No. of Rooms per Tene- ment.	No. of Families.													Total Fam- ilies.	Popu- lation.
	No. in Family.														
	1	2	3	4	5	6	7	8	9	10	11	12	13		
1	89	144	49	19	5	—	1	—	1	—	—	—	—	308	641
2	249	370	251	170	123	47	32	13	5	1	—	—	—	1261	3702
3	204	819	858	730	471	335	195	107	48	20	4	—	1	3792	14611
4	620	3820	4800	4192	3231	2231	1337	878	447	204	72	26	5	21863	92584
Total	1162	5153	5958	5111	3830	2613	1565	998	501	225	76	26	6	27224	111538

	1911.	1901.
Total separate occupiers ...	40,681	36,177
Tenements with four rooms or more	35,189	33,619
Tenements with two rooms or less	1,569	1,796

### **Overcrowding.**

Very few cases of serious overcrowding have been found during the last 10 years, but where such cases were discovered it was only necessary to give a verbal notice from the Sanitary Inspector for the tenants to remove into a house containing better accommodation. It has not been found necessary to take legal proceedings in any case of overcrowding during the last 10 years.

## **Rentals.**

The rentals of these houses have no doubt been changed since 1914, but returns made by the Rate Department in February 1914 shewed 15,499 houses up to 4/6 a week; 16,897 between 4/7 to 6/6; 3,877 between 6/7 to 8/6; and 2,021 between 8/7 to 10/- per week.

## **Empty Houses.**

Up to September, 1917, there was always a margin of 500 to 600 houses unoccupied. Since that time, however, this number has been reduced, and at the present time there are only 25 working class dwellings (including several combined houses and shops) empty. Under normal conditions the greatest deficiency of empty houses is that type of house having a rental between 4/7 to 10/- per week.

The following table shews the number of houses erected, made fit, closed, and demolished during the years 1901 to 1918.

Year.	Houses Closed.	Demolished.	Made Fit,	Houses Erected.
1901	30	22	28	490
1902	26	8	19	452
1903	20	80	12	409
1904	1	55	72	464
1905	11	26	22	473
1906	13	69	25	460
1907	65	43	24	552
1908	43	124	43	521
1909	17	111	87	619
1910	58	115	45	618
1911	44	5	21	501
1912	22	44	2	350
1913	16	22	8	294
1914	38	48	112	271
Total	404	772	520	6474
Average 1901-14	29	55	37	462
1915	4	39	30	170
1916	12	...	8	61
1917	22	...	...	10
1918	...	31	...	1
Total	38	70	38	242
Average 1915-18	9	18	10	60



During the period 1901 to 1914 the average number of houses erected per annum was 462, and 37 houses made fit for habitation, but on the other hand an average of 84 houses were closed or demolished, leaving a net increase of 415 houses per annum.

During the period of the war the average net yearly increase was only 43, so that the net decrease in houses during the period of the war, due to interference with building operations, is about 1,500.

### **Back-to-Back Houses.**

Among the cheaper rented houses there are still 1,082 back-to-back houses. If these houses are converted into "through" houses it will reduce the number of tenements available for separate occupiers, and it will be therefore necessary to arrange for an increase in the number of new houses to be erected to take their place.

### **Houses Required.**

Taking into consideration therefore the new houses required on account of the stoppage of building operations during the war (1,500), new houses required to be built during 1919 to 1921 (830), those required in substitution of houses to be demolished in several areas requiring reconstruction and improvement (200), and those required owing to the conversion of back-to-back houses into "through" houses (540), I am of the opinion that approximately 3,000 new houses will be required within the next few years.

### **Sites.**

I have seen the estates at Platt Hill and Crompton Fold, and consider both suitable for the erection of working class dwellings.

### **Marriages.**

The average number of marriages before the war was about 1,430 per annum. There has been no increase during the war; the last return (1918) of the Superintendent Registrar being 1,172.

### **Births and Deaths.**

The following figures shew the number of births and deaths for the four years 1915 to 1918. The deaths, however, do not include men who have died on active service during the war, concerning whom no returns are yet available for Bolton.

Year.	Births.	Deaths.	Net Increase of Births over Deaths.
1915	3,620	2,713	907
1916	3,067	2,419	648
1917	2,710	2,477	233
1918	2,749	2,700	49

### **Reconstruction Schemes.**

During the 15 years before the war a large sum of money was spent in schemes of reconstruction, demolition, and improvement of houses; equal to a  $\frac{3}{4}$ d. rate per annum. This work was interfered with by the war, but several areas have already been listed by the Public Health Committee for reconstruction and improvement.

### **Closet Accommodation.**

60% of the closet accommodation in Bolton is on the water carriage system, and 40% on the privy midden and pail system. Up to the outbreak of war an average of a  $\frac{1}{2}$ d. rate was spent each year in assisting owners to convert these old-fashioned closets into water closets, and this work has also been interrupted by the war.

JOHN E. GOULD,  
Medical Officer of Health.



ENUMERATION OF BACK-TO-BACK AND SINGLE HOUSES IN WARDS,  
1919.

Ward.				Back-to-Back	Single.	Total, 1919.	Total, 1903.
East	...	...	...	179	53	232	595
Derby	...	...	...	210	33	243	375
Bradford	...	...	...	268	47	315	457
Exchange	...	...	...	122	66	188	324
West	...	...	...	89	72	161	211
Church	...	...	...	77	19	96	136
Halliwell	...	...	...	31	40	71	83
North	...	...	...	—	4	4	14
Rumworth	...	...	...	14	4	18	20
Astley Bridge	...	...	...	25	40	65	97
Smithills	...	...	...	19	28	47	58
Darcy Lever-cum-Brightmet	...	...	...	8	24	32	44
Tonge	...	...	...	34	—	34	34
Deane-cum-Lostock	...	...	...	2	39	41	43
Heaton	...	...	...	—	34	34	34
Total				1078	503	1581	2525

### **Closet Accommodation.**

During the year 1919 there were 15 conversions of privy-middens or pails into fresh water closets in the Old Borough and 14 in the Added Area.

From 1899-1919 inclusive, 10,072 closets have been converted at a cost to the Corporation of £20,084, and replaced by water-closets, and 299 closets have been demolished. In new houses during the same period, 8357 water-closets have been provided.

The present number of privy-middens and pails as compared with those of 1898 are :—

District.	Privy-middens			Pails	
	1898	1919	...	1898	1919
Old Borough ...	12740	5577	...	6782	6281
Added Area ...	7581	5043	...	22	27
Extended Borough	20321	10620	...	6804	6308

In the Old Borough in 1898 the numbers were :

Privy-middens and Pails	...	...	...	...	19522
Water-closets ...	...	...	...	...	7587

At present the numbers are :

Privy-middens and Pails	...	...	...	...	11858
Water-closets ...	...	...	...	...	17826

Formerly in the Old Borough 75 per cent. of the closets were on the dry system and 25 per cent. on the water-carriage system ; now, 40 per cent. are on the dry system and 60 per cent. on the water-carriage system.



CLOSET ACCOMMODATION, 1919.

	No. of Closets Converted or Demolished, 1919.				Conversions in Old Houses and Additions in New Houses, 1919.				Present Closet Accommodation, 1919.				Per Cent on	
	P.M.	Pail.	W.W.C.	F.W.C.	P.M.	Pail.	W.W.C.	F.W.C.	P.M.	Pail.	W.W.C.	F.W.C.	Dry System.	Water System.
Old Borough ...	12	3	2	...	...	...	...	19	5577	6281	10944	6882	39'9	60'1
Great Lever ...	...	...	...	...	...	...	...	...	1218	...	1113	574	41'9	58'1
Tonge ...	2	...	...	...	...	...	...	2	1229	...	786	525	48'4	51'6
Astley Bridge ...	5	...	...	...	...	...	...	7	627	7	506	1045	29'0	71'0
Smithills ...	...	...	...	...	...	...	...	...	348	4	728	561	21'4	78'6
Hulton ...	7	...	...	...	...	...	...	7	432	...	596	432	29'6	70'4
Darcy Lever-cum- Brightmet	...	...	...	...	...	...	...	...	619	...	183	187	62'5	37'5
Deane-cum-Lostock	...	...	...	...	...	...	...	...	366	4	213	280	42'8	57'2
Heaton ...	...	...	...	...	...	...	...	2	204	12	152	441	26'7	73'3
Extended Borough	26	3	2	...	...	...	...	35	10620	6308	15221	10927	39'3	60'7

### **Workshops and Workplaces.**

The number and character of trades in registered workshops are :

Trade.	No. in Trade.	Trade.	No. in Trade.
Bakers, &c....	252	Leather Dealers	6
Dressmakers, Drapers, &c.	135	Chemists	5
Boot and Clog Makers and Repairers	119	Brush Makers	5
Tailors	71	Ironmongers	5
Milliners	65	Wheelwrights	5
Cabinet Makers	24	Signwriters	5
Joiners, etc.	22	Funeral Furnishers	4
Tinplate Workers	19	Skip Makers	4
Plumbers	17	Umbrella Makers	4
Ice Cream Manufacturers	16	Picture Framers	4
Underclothing Makers	13	Paper Dealers	4
Cotton Waste Dealers	13	Bedding Manufacturers	3
Saddlers	12	Bookbinders	3
Printers	11	Coach Builders	3
Stocking Knitters	9	Provision Dealers	3
General Smiths	9	Scale Makers...	3
Watch and Clock Makers	9	Tarpaulin Manufacturers	3
Laundries	9	Tripe Works...	3
Coopers, etc.	7	Window Blind Makers	3
Horse-shoeing	7	Chemical Works	2
Sugar Boilers	6	Clog Iron Makers	2
Cycle Makers	6	Masons	2
Drysalters and Packers	6	Rope Makers...	2
Rag Sorters	6	Herbal Brewers	2
		Miscellaneous Trades	51



### **Bakehouses.**

At the end of the year there were 252 bakehouses on the register, of which 20 were underground and certified in accordance with Section 99 of the Factory and Workshop Act.

The ward distribution of the underground bakehouses is as follows:—Halliwell, 2; Bradford, 3; Derby, 3; East, 3; Church, 3; North, 1; Exchange, 3; Smithills, 1 and Astley Bridge 1.

### **Offensive Trades and Slaughterhouses.**

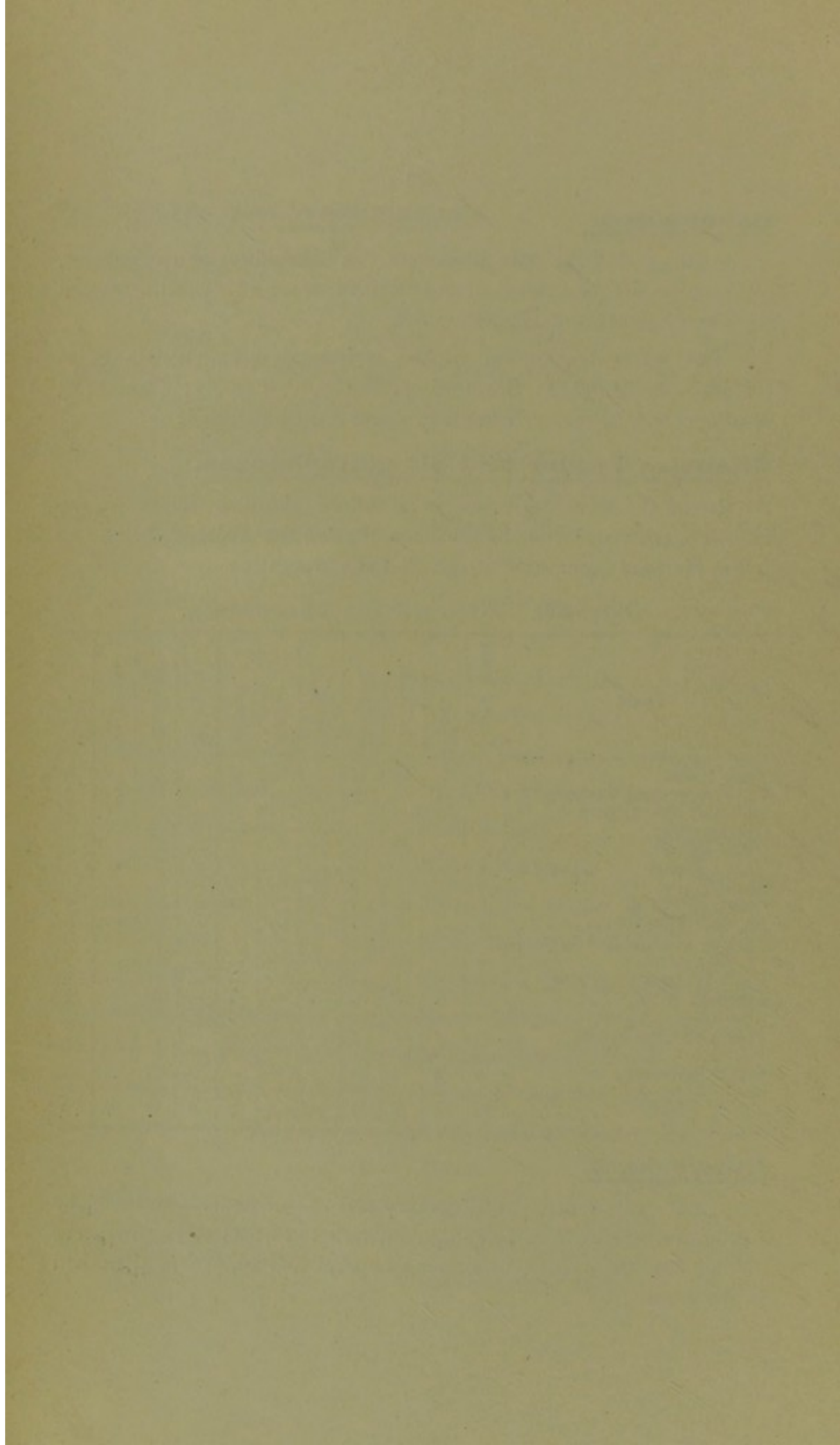
16 of the slaughterhouses in Bradford Ward as shewn in the following table are in one building constituting the Abattoirs belonging to the Markets Committee of the Bolton Corporation.

OFFENSIVE TRADES AND SLAUGHTERHOUSES.

Trade.	Added Area.	West.	Halliwell.	Bradford.	Derby.	East.	Church.	North.	Rumworth.	Exchange.	Total.
Tripe Boilers ...	1	...	...	3	...	...	2	...	...	...	6
Fellmongers and Tanners ...	...	1	...	1	...	...	...	...	...	...	2
Hide and Skin Depots ...	...	...	...	...	...	1	...	...	...	1	2
Gut Scraping ...	...	...	...	1	...	...	...	...	...	...	1
Blood Boiler ...	...	...	...	...	...	...	1	...	...	...	1
Tallow Melter ...	...	...	...	...	...	...	...	...	...	1	1
Soap Works ...	1	...	...	...	...	...	...	...	...	...	1
Chemical Works ...	...	...	...	...	...	1	1	...	...	...	2
Muriatic Acid Works ...	1	...	...	...	...	...	...	...	...	...	1
Tar and Ammoniated Sulphate Works... ..	1	...	...	...	...	...	...	...	...	...	1
Brick Works ...	6	...	1	...	...	...	...	...	1	...	8
Knackers' Yard ...	...	...	...	...	...	...	1	...	...	...	1
Total Offensive Trades ..	10	1	1	5	...	2	5	...	1	2	27
Slaughterhouses ...	9	4	3	20	2	2	2	1	1	5	49
Total ...	19	5	4	25	2	4	7	1	2	7	76

### **Outworkers.**

3 lists were received in February and 10 in August containing the names and addresses of 15 and 39 outworkers respectively. All were employed in the making of wearing apparel and all, except 4, worked in the Borough.





**SECTION VI.**

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**Medical Inspection of Schools**  
**AND**  
**School Children.**

AT WASHINGTON

OFFICE OF THE SECRETARY OF THE ARMY

WASHINGTON, D. C.



## General Information.

The Elementary Education Rate for 1919-20 was 27·72d. in the £. The cost of Medical Inspection was £1073. 8s. 6d., or 0·31d. in the £.

ELEMENTARY SCHOOLS.				1918.	1919.
Voluntary Schools	...	...	...	36	36
Departments	...	...	...	75	75
Council Schools	...	...	...	21	21
Departments	...	...	...	41	41
Special Schools	...	...	...	4	4

ACCOMMODATION.					
Voluntary Schools	...	...	...	17355	17355
Council Schools	...	...	...	18574	18574
Special Schools	...	...	...	396	396
Total Accommodation	...	...	...	36325	36325

ON THE ROLLS.					
Average on rolls (including half-timers)	...	...	...	29184	28361
Average in attendance (inc. half-timers)	...	...	...	24855	24114
Per cent. attending (exclusive of half-timers)	...	...	...	82·0	88·4
Average number of half-timers on rolls	...	...	...	1871	1992
Under 5 on rolls (average)	...	...	...	2712	2369
Under 5 average attendance	...	...	...	1662	1603
Per cent. of average attendance	...	...	...	61·3	62·7

The hygienic condition of the schools has been satisfactory. There has been no alteration in the organisation of medical inspection or the scope of the same.

### SUMMARY OF WORK DONE, 1919.

1.	Total children examined (Routine Inspection)...	6242
	(a) Entrants ... ..	3167
	(b) Leavers ... ..	2670
	(c) Specials ... ..	405
2.	Referred for further examination (to Clinic) ...	160
3.	Total examinations ... ..	17160
	(a) Total examined at schools ... ..	6342
	(b) Re-examination ... ..	1422
	(c) At Inspection Clinic ... ..	9396
4.	No. of children attended Inspection Clinic ...	1725
	No. of attendances made by such children ...	9396
	No. of children treated at clinic ... ..	1350
	No. of attendances made ... ..	8540
5.	Visits to Schools ... ..	219
	Visits re epidemics ... ..	60
6.	Visits to homes ... ..	532

## NUMBER OF CHILDREN INSPECTED DURING 1919.

## A.—“CODE” GROUP.

## ENTRANTS.

Age.	3	4	5	6	Other Ages.	Total.
Boys ... ..	224	438	671	259	44	1636
Girls ... ..	150	418	707	221	35	1531
Totals ... ..	374	856	1378	480	79	3167

Age.	Intermedi- ate Group.	Leavers.					Grand Total.
	8	12	13	14	Other Ages.	Total.	
Boys ...	Nil.	1058	69	1	179	1307	2943
Girls ...	Nil.	1065	66	1	231	1363	2894
Totals ...	Nil.	2123	135	2	410	2670	5837

## B.—GROUPS OTHER THAN “CODE.”

	Intermediate Group (other than 8 years)	Special Cases.	No. of Children Re-examined.
Boys... ..	Nil.	150	603
Girls ... ..	Nil.	255	819
Totals ... ..	Nil.	405	1422

## PRESENCE OF PARENTS.

Department.	No. Examined.	No. of Parents Present.	Per Cent.
Entrants ... ..	3167	1217	38·4
Leavers ... ..	2670	367	13·7



## **Facts Disclosed by Medical Inspection.**

JOHN McKEAGUE, L.R.C.P., L.R.C.S., D.P.H.

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### Classified List of Defects for which Children were excluded, 1919 .

Verminous condition	...	...	...	...	19
Sore Heads	...	...	...	...	48
Nits and Dirty Heads	...	...	...	...	14
Ringworm	...	...	...	...	97
Scabies	...	...	...	...	93
Skin Diseases	...	...	...	...	184
External Eye Diseases	...	...	...	...	58
Defective Vision	...	...	...	...	2
Ear Diseases...	...	...	...	...	11
Tonsils and Adenoids	...	...	...	...	26
General Debility	...	...	...	...	55
Pulmonary Tuberculosis	...	...	...	...	9
Suspected Tuberculosis	...	...	...	...	
Non-pulmonary Tuberculosis	...	...	...	...	18
Heart Diseases	...	...	...	...	6
Nervous Diseases	...	...	...	...	11
Mental Defect	...	...	...	...	1
Infectious Diseases	...	...	...	...	17
Bronchitis	...	...	...	...	22
Miscellaneous	...	...	...	...	64

### TEETH.

Caries of the teeth is still an outstanding defect amongst the children. 5837 children were examined, of whom 1762 had defective teeth, equal to 30.18%.

## VISION.

1275 Boys and 1313 Girls were examined with the result given below :—

					BOYS.	GIRLS.
6/6	both eyes	...	...	...	320	256
6/6	right eye	...	...	...	38	29
	left eye	...	...	...	39	48
6/9	right eye	...	...	...	666	786
	left eye	...	...	...	714	748
6/12	right eye	...	...	...	71	83
	left eye	...	...	...	61	80
6/18	right eye	...	...	...	112	127
	left eye	...	...	...	99	130
6/24	right eye	...	...	...	43	26
	left eye	...	...	...	42	27
6/36	right eye	...	...	...	9	8
	left eye	...	...	...	9	4
6/60	right eye	...	...	...	3	2
	left eye	...	...	...	1	3
6/∞	right eye	...	...	...	1	3
	left eye	...	...	...	2	1

282 children obtained glasses during the year.

RINGWORM :—108 Boys and 61 Girls were found to be suffering from Ringworm during the year.

VACCINATION.—5837 children were examined, 2654 of whom had no marks visible.



## SCHOOL CLINIC, 1919.

No. of children attended...	...	...	...	1725
No. of attendances made by such children	...	...	...	9396
No. of children treated	...	...	...	1350
No. of attendances made by such children	...	...	...	8540
No. of times open...	...	...	...	352

DISEASES OR DEFECTS.	CHILDREN.	ATTENDANCES.
Skin Diseases ... ..	464	5039
Non-pulmonary Tuberculosis ...	36	104
Vision ... ..	106	135
Ex. Eye Defects ... ..	201	1175
Tonsils and Adenoids ... ..	106	132
Ear Diseases ... ..	78	317
Uncleanliness ... ..	71	302
Heart Disease ... ..	7	13
Nervous Condition ... ..	17	29
Mental Condition ... ..	20	23
Deformities ... ..	12	18
Infectious or Contagious Diseases	17	34
Rickets ... ..	12	16
Teeth ... ..	1	1
Lung Diseases ... ..	139	473
Other Defects ... ..	404	1551
Nil ... ..	34	34
TOTALS ... ..	1725	9396

**Review of the methods available for "following up" and the Treatment of Defects.**

Work accomplished :—

Children examined at Clinic ... ..	1725
Children treated at Clinic ... ..	1350
No. of attendances of children treated	8540

## Operations performed :—

At Bolton Infirmary ... ..	145
By Private Practitioners ... ..	17
At Manchester Royal Infirmary ... ..	1
At Manchester Eye Hospital... ..	1
At Manchester Skin Hospital ... ..	1

Children treated for Pulmonary Tuberculosis, suspected  
Tuberculosis and Non-pulmonary Tuberculosis :—

Meathop Sanatorium ... ..	1
Wilkinson Sanatorium... ..	15
Heswall ... ..	3

## Children treated for Debility :—

Southport Convalescent Home ... ..	170
Medical and Home Treatment ... ..	1102
Left the Borough ... ..	14

## Defects under treatment, 31st December, 1919 :—

Medical ... ..	68
Infirmary ... ..	62
Home Treatment ... ..	6
Waiting Beds ... ..	32

Children received Virol or Cod Liver Oil and Malt ... 130

**Blind and Deaf Children.**

Accommodation is provided for both resident and day scholars in the Thomasson Memorial School. There are 48 places each for the blind and deaf day scholars and 20 places for each class of residents.

At the end of 1919 there were 19 resident and 22 day blind scholars, and 9 resident and 20 day deaf scholars. Of the resident



scholars, 5 were maintained by the Bolton Education Authority, and 23 by other Authorities.

The health of the resident pupils and staff has been excellent.

#### SPECIAL SCHOOLS.

Accommodation for mentally and physically defective children is provided at Flash Street and Kay Street Schools. In the former 120 mentally and 90 physically defective are provided for, and at the latter 100 mentally defective. At the end of 1919 there were 93 mentally defective on the register at Flash Street, 56 being boys and 37 girls. At Kay Street, there were 64 on the register, of whom 44 were boys and 20 girls.

#### PROVISION OF MEALS, 1919.

1st January to 31st December.

Quarter ending.	No. of Meals given.
31/3/19	1105
30/6/19	961
30/9/19	657
31/12/19	1161
	<hr/>
	3884
	<hr/>
Children having meals 1/1/19	... 45
" " " 31/12/19	... 41

RETURN OF DEFECTS FOUND IN THE COURSE OF  
MEDICAL INSPECTION IN 1919.

DEFECT OR DISEASE.		Code Groups.		Specials.
		No. referred for treatment.	No. requiring to be kept under observation, but not referred for treatment.	No. referred for treatment.
(1)		(2)	(3)	(4)
SKIN.	Malnutrition .....	11	...	...
	Uncleanliness, Head...	318	...	32
	Body...	17	...	...
	Ringworm, Head...	15	...	13
	Body...	1	...	6
	Scabies.....	11	...	10
	Impetigo .....	24	3	31
	Other Diseases .....	5	17	3
EYE.	Def. Vision and Squint	285	62	196
	Ex. Eye Diseases .....	7	42	10
EAR.	Def. Hearing .....	19	81	11
	Ear Diseases .....	50	17	8
TEETH.	Dental Disease .....	...	162	...
NOSE AND THROAT.	Enld. Tonsils .....	176	64	9
	Adenoids .....	62	15	10
	Enld. T. & Adenoids...	147	2	6
	Defective Speech .....	3	12	1
HEART AND CIRCULATION.	Heart Disease.			
	Organic .....	11	27	1
	Functional ... ..	16	20	1
	Anæmia .....	6	19	7
LUNGS.	Pulmonary Tuberculosis	...	...	...
	Definite .....	1	...	...
	Suspected .....	4	2	...
	Chronic Bronchitis ...	15	8	1
	Other Diseases .....	12	35	3
NERVOUS SYSTEM.	Epilepsy .....	4	...	...
	Chorea .....	...	...	1
	Other Diseases .....	10	...	8
	Non-pulm. Tuberculosis.			
	Glands .....	3	10	...
	Bones and Joints ...	2	3	...
	Other forms.....	...	...	...
	Rickets .....	17	36	1
	Deformities .....	6	20	...
	Other Defects or Dis.	26	93	23



## TREATMENT OF DEFECTS OF CHILDREN DURING 1919.

Condition.	No. of defects found for which treatment was considered necessary.			No. of defects for which no report is available.	No. of defects Treated.	Results of Treatment.			No. of defects not Treated.	Per Cent of Defects Treated.
	From previous year	New.	Total.			Remedied.	Improved.	Unchanged		
Clothing ... ..	1	1	2	...	2	2	...	...	...	100
Footwear ... ..	...	3	3	...	3	3	...	...	...	100
Cleanliness—										
Head ... ..	80	341	421	...	334	334	...	...	87	79.7
Body ... ..	14	17	31	...	28	28	...	...	13	90.3
Nutrition ... ..	...	24	24	...	24	19	14	1	...	100
Nose and Throat ... ..	40	408	448	5	371	204	107	60	72	82.8
Ex. Eye Diseases ... ..	5	17	22	...	9	7	2	...	13	40.9
Ear Diseases ... ..	...	58	58	...	49	29	20	...	7	84.5
Teeth ... ..	2	...	2	...	...	...	...	...	2	...
Heart and Circulation ... ..	3	29	32	...	32	6	14	12	...	100
Lungs ... ..	...	36	36	1	26	9	16	1	9	72.2
Nervous System ... ..	...	19	19	...	16	3	11	2	3	84.2
Skin ... ..	...	119	119	...	112	110	2	...	7	94.1
Rickets ... ..	3	18	21	...	20	1	18	1	1	95.2
Deformities ... ..	...	6	6	...	6	1	5	...	...	100
Tubercul. Non-pulm. ... ..	...	5	5	...	5	3	2	...	...	100
Speech ... ..	...	4	4	...	3	...	...	...	...	75
Mental Condition ... ..	...	4	4	...	4	4	...	...	...	100
Def. Vision & Squint ... ..	78	481	559	2	348	282	66	...	209	62.2
Hearing ... ..	2	30	32	...	19	...	19	...	13	59.4
Miscellaneous ... ..	8	45	53	...	28	15	11	2	25	51.1

## INSPECTION, TREATMENT, &amp;C., OF CHILDREN DURING 1919.

1. The total number of children medically inspected (whether Code Group, Special or ailing child... .. 6342
2. The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footwear) who require to be kept under observation (but not referred for treatment) ... .. 2350
3. The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.) ... .. 1304
4. The number of children in (3) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.) ... .. 635

**Physical Training.**

PERCY RIGBY, SUPT. OF PHYSICAL TRAINING.

I beg to report that the Board of Education's New Syllabus of Physical Training for Schools 1919, is being introduced in all the schools under the Bolton Education Authority.

Classes are held during the Winter Session for the training of Teachers in the Board of Education Drill Syllabus.

Classes are also held on three evenings per week for the teaching of Morris, Folk and Country Dancing.

My whole time is occupied in visiting the schools, supplementing the work of the teachers by supervision, and the giving of model lessons in Physical Exercises, Dances and Games.



**SECTION VII.**

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**Appendix.**

CAUSES OF DEATH.	Total	SEX.		AGE.															
		M.	F.	0	1	2	3	4	5	10	15	20	25	30	35	40	45	50	
				to 1	to 2	to 3	to 4	to 5	to 10	to 15	to 20	to 25	to 30	to 35	to 40	to 45	to 50		
<b>General Diseases.</b>																			
Small Pox																			
{ Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
{ Not Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
{ Doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever	4	1	3	...	...	...	...	1	1	1	...	...	1	...	...	...	...	...	
Diphtheria & Membranous Croup	61	34	27	1	3	3	5	12	33	4	...	...	...	...	...	...	...	...	
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric Fever	5	2	3	...	...	...	...	...	...	...	1	1	...	...	2	1	...	...	
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Erysipelas	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Septicæmia (not puerperal)	2	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	
Pyæmia (not puerperal)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	18	9	9	1	6	2	1	3	5	...	...	...	...	...	...	...	...	...	
German Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chicken Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Mumps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Influenza	301	142	159	5	3	3	6	4	11	13	15	17	40	27	17	12	24	...	
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Malaria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rabies	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Glanders, Farcy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Anthrax, Splenic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Mycoses	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pulmonary Tuberculosis	164	91	73	...	...	1	1	...	1	7	13	18	15	11	18	19	8	...	
Acute Miliary Tuberculosis,	9	3	6	...	...	...	...	...	...	...	2	1	2	1	...	...	...	...	
Acute Phthisis																			
Tubercular Meningitis	13	7	6	2	3	2	...	...	2	1	1	...	...	1	...	1	...	...	
Tabes Mesenterica	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
Other Peritoneal and	7	5	2	...	...	1	...	...	2	1	1	...	...	...	...	1	...	...	
Intestinal Tubercle																			
Tuberculosis of Spinal Column	7	5	2	...	...	...	...	...	2	...	2	...	...	1	...	1	1	...	
Tuberculosis of Joints	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lupus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scrofula	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tuberculosis of other Organs	7	4	3	...	...	...	...	...	1	...	1	...	...	3	...	...	11	...	
General Tuberculosis	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rickets	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
Syphilis	8	3	5	5	...	...	1	...	...	...	...	...	...	1	...	1	...	...	
Purulent Ophthalmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Venereal Diseases	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	
Cancer of the Buccal Cavity	12	11	1	...	...	...	...	...	...	...	...	...	...	...	1	1	11	...	
"    "    Stomach, Liver	55	26	29	...	...	...	...	...	...	...	...	...	...	...	1	1	11	...	
"    "    Peritoneum, Intes-	33	14	19	...	...	...	...	...	...	...	...	...	1	...	...	2	11	...	
"    "    tines and Rectum																			
"    "    Female Genital	25	...	25	...	...	...	...	...	...	...	...	...	1	1	...	3	55	...	
"    "    Organs																			
"    "    Breast	18	...	18	...	...	...	...	...	...	...	...	...	...	...	2	...	23	...	
"    "    Skin	4	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
"    "    of other Organs	29	18	11	...	...	...	...	...	...	...	1	...	...	1	...	2	44	...	
Other Tumours	2	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	
Rheumatic Fever,	15	8	7	...	...	...	...	...	2	2	3	...	1	1	1	...	...	...	
Acute Rheumatism																			
Chronic Rheumatism Gout,	10	3	7	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	
Osteo-Arthritis																			
Diabetes	19	8	11	...	...	...	...	...	...	...	1	...	...	1	2	1	...	...	
Exophthalmic Goitre	10	2	8	...	...	...	...	...	...	...	1	...	...	...	2	1	11	...	
Leucocythæmia	3	3	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	
Anæmia, Chlorosis	20	4	16	...	...	...	...	...	1	...	2	...	1	2	...	33	...	...	
Purpura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hæmophilia, Hæmorrhagic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diathesis																			
Alcoholism, Delirium Tremens	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Occupational Lead Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other General Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total General Diseases	872	414	458	14	15	13	14	20	63	29	44	40	61	52	48	48	53	...	



WARD.

60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards.	0 to 5	5 and upwards.	North	East	West	Exchange	Bradford	Church	Great Lever	Derby	Hulton	Deane-c-Lostock	Runworth	Halliwell	Heaton	Smithills	Astley Bridge	Tonge	Dar Lever-c-Br'tmet
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	1	3	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...
...	...	...	...	...	...	24	37	2	5	13	1	7	2	...	2	1	...	12	1	4	3	7	1	...
...	...	...	...	...	...	...	5	...	...	...	...	...	...	1	...	1	...	2	...	...	...	...	1	...
...	...	1	1	...	...	...	3	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
...	...	...	...	...	...	13	5	...	2	3	1	2	1	1	2	1	...	1	2	...	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	21	11	9	2	...	21	280	7	18	36	3	35	19	31	24	10	5	11	34	4	18	18	17	11
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
14	3	4	2	1	...	2	162	2	13	17	9	24	4	7	16	3	...	11	25	3	4	11	11	4
1	...	...	...	...	...	...	9	...	1	3	...	1	1	...	1	...	...	...	...	...	...	1	1	...
...	...	...	...	...	...	7	6	...	1	4	1	1	1	...	1	...	...	1	...	1	1	1	1	...
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	1	6	...	...	...	2	...	2	...	...	...	1	...	...	1	...	1	...	...
...	...	...	...	...	...	7	...	1	1	...	1	...	...	2	...	...	...	1	...	...	...	1	...	...
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...	1	...	...	...	...	7	...	...	...	1	1	...	2	...	...	...	2	...	2	...	1	...	...	...
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...	...	...	...	...	...	6	2	...	1	2	1	...	...	...	1	...	...	1	...	...	1	...	1	1
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
1	4	...	...	1	...	12	1	3	1	1	1	1	...	1	...	...	1	...	...	2	1	...	...	...
17	7	8	2	...	...	55	3	1	11	2	3	8	2	4	...	2	2	8	1	2	4	1	1	1
6	3	3	3	3	...	33	1	2	5	...	4	3	1	1	2	1	2	3	1	2	2	3	...	...
5	3	2	...	...	...	25	...	...	3	...	1	5	2	3	...	1	2	3	...	...	5	...	...	...
4	...	1	1	...	...	18	1	1	3	1	3	1	2	1	...	1	...	...	...	...	1	2	1	...
...	2	...	...	1	...	4	1	...	...	...	...	...	1	...	...	2	...	...	...	...	...	...	...	...
7	2	2	...	...	...	29	...	1	4	2	3	3	4	1	4	...	1	3	1	...	...	2	...	...
1	...	...	...	...	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
1	2	1	...	...	...	15	...	1	2	...	2	...	...	1	1	...	3	...	...	2	1	2	...	...
1	6	1	1	...	...	10	...	1	2	...	1	2	...	1	...	...	1	1	...	...	...	1	...	...
2	4	1	1	1	...	19	1	1	5	...	1	...	3	2	...	...	...	1	...	1	1	2	1	...
...	...	1	...	...	...	10	...	...	3	...	...	1	1	1	...	...	...	1	2	...	1	...	...	...
2	1	1	...	...	...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...
...	...	...	...	...	...	20	1	1	3	...	2	1	...	3	1	...	2	1	...	3	...	3	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
83	59	37	20	9	...	76	796	20	54	124	26	99	53	58	70	27	12	38	101	13	41	53	59	21



CAUSES OF DEATH.	Total	SEX.		AGE.															
		M.	F.	0	1	2	3	4	5	10	15	20	25	30	35	40	45		
				to 1	to 2	to 3	to 4	to 5	to 10	to 15	to 20	to 25	to 30	to 35	to 40	to 45	to 50		
<b>Nervous System and Organs of Special Sense.</b>																			
Meningitis, Inflammation of Brain ...	23	14	9	2	4	...	4	2	5	...	...	1	...	2	...	...	1		
Encephalitis ...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...		
Locomotor Ataxy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Other Diseases of Spinal Cord, Poliomyelitis ...	15	7	8	...	...	1	...	...	...	...	...	1	...	1	...	...	1		
Apoplexy ...	6	13	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Cerebral Hæmorrhage ...	117	51	66	...	...	...	...	...	...	...	...	...	2	1	1	4	5		
Softening of Brain ...	4	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Hemiplegia ...	6	1	5	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Paraplegia ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
General Paralysis of Insane ...	12	11	1	...	...	...	...	...	...	...	...	...	...	...	1	3	3		
Other forms of Mental Alienation ...	2	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...		
Epilepsy ...	11	7	4	1	...	...	...	...	...	...	1	1	1	...	1	1	...		
Convulsions (non-puerperal; 5 years and over) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Infantile Convulsions with Teething (under 5 years) ...	35	19	16	30	4	1	...	...	...	...	...	...	...	...	...	...	...		
Chorea ...	3	1	2	...	...	...	...	...	...	1	2	...	...	...	...	...	...		
Neuritis ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Cerebral Tumour ...	4	2	2	...	...	...	...	...	...	...	...	...	1	...	1	1	...		
Idiocy, Imbecility ...	2	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...		
Other Diseases of Nervous System ...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Mastoid Disease ...	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...		
Other Diseases of the Ears ...	3	1	2	1	...	...	...	...	1	...	...	1	...	...	...	...	...		
Total Nervous System, &c....	249	124	125	34	8	2	4	3	6	1	3	5	7	4	4	9	12		
<b>Circulatory System.</b>																			
Pericarditis ...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Acute Endocarditis, Acute Myocarditis ...	10	3	7	...	...	...	...	...	2	...	...	1	...	1	...	1	2		
Valvular Disease ...	125	53	72	...	...	...	...	...	2	...	...	1	4	6	4	5	7		
Fatty Degeneration of Heart ...	12	4	8	...	...	...	...	...	...	1	...	...	...	...	...	...	1		
Other Organic Disease of Heart...	43	13	30	...	...	...	...	1	...	...	...	1	...	...	1	1	3		
Angina Pectoris ...	10	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Aneurysm ...	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2		
Other Diseases of the Arteries ...	52	29	23	...	...	...	...	...	...	...	...	...	...	1	1	...	2		
Embolism and Thrombosis ...	28	10	18	...	...	...	...	...	1	...	...	...	...	...	...	2	1		
Other Diseases of Lymphatic System ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Hæmorrhage; other Diseases of the Circulatory System ...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Total Circulatory System ...	287	125	162	...	...	...	...	1	5	1	...	3	4	8	6	9	18		



WARD.

60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards.	5 to 5	5 and upwards.	North	East	West	Exchange	Bradford	Church	Great Lever	Derby	Hulton	Deane-c-Lostock	Rumworth	Halliwell	Heaton	Smithills	Astley Bridge	Tonge	Dar Lever-c-Br hmet
...	...	...	...	...	...	12	11	...	7	2	...	3	1	...	2	...	1	2	4	...	...	...	1	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	4	1	1	1	...	1	14	1	...	3	...	...	1	3	1	...	...	1	4	...	1	...	...	...
2	1	3	...	...	...	...	6	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1
19	18	22	14	6	1	...	117	7	4	18	3	18	6	7	15	4	...	3	10	...	4	6	10	2
1	1	1	...	...	...	...	4	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...
...	2	2	1	...	...	...	6	...	...	1	...	...	...	1	2	...	...	1	...	...	...	...	1	...
1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	12	2	3	...	...	1	...	1	2	...	...	1	...	...	...	1	1	...
...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
1	2	...	1	...	...	1	10	...	...	2	...	1	1	...	1	...	...	...	2	...	1	2	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	35	...	3	7	3	...	3	...	...	5	1	...	...	11	...	...	1	1	...
...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	4	...	1	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...
...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...
28	28	29	17	7	1	51	198	16	23	33	4	26	10	13	31	7	1	8	34	1	9	10	19	4
...	...	1	...	...	...	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	10	...	...	...	1	...	...	...	1	...	1	2	4	...	...	...	1	...
19	21	19	12	1	...	...	125	5	11	18	3	15	10	7	16	2	...	5	16	2	2	5	6	2
3	1	1	2	...	...	...	12	...	...	1	1	1	2	...	2	...	...	1	1	...	...	1	2	...
9	6	4	8	1	...	1	42	1	1	5	1	5	3	3	3	1	1	...	5	1	4	5	2	2
4	3	2	...	...	...	...	10	...	...	2	...	3	1	...	1	1	...	1	...	...	1	...	...	...
...	...	...	...	...	...	...	3	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
4	10	11	6	7	5	...	52	1	4	9	1	4	2	2	7	1	1	5	8	...	1	2	1	3
7	4	6	2	...	...	...	28	2	...	7	2	3	1	1	3	1	3	1	1	2	1	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...
46	45	44	31	10	5	1	286	9	18	43	9	31	19	13	35	6	6	14	36	6	8	15	12	7



CAUSES OF DEATH.	Total	SEX.		AGE.														
		M.	F.	0	1	2	3	4	5	10	15	20	25	30	35	40	45	
				to 1	to 2	to 3	to 4	to 5	to 10	to 15	to 20	to 25	to 30	to 35	to 40	to 45	to 50	
<b>Respiratory System.</b>																		
Nasal Fossæ ...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Laryngitis ...	6	5	1	...	1	...	1	...	2	1	...	...	...	...	...	...	1	
Bronchitis ...	354	153	201	26	10	2	1	2	3	1	...	1	3	2	1	2	1	
Broncho, Catarrhal and Lobular Pneumonia ...	84	44	40	16	20	5	2	4	3	1	3	1	...	2	...	2	...	
Lobar and Croupous Pneumonia ...	47	26	21	...	...	...	1	1	1	2	2	4	4	2	3	6	8	
Pneumonia ...	80	46	34	12	4	2	4	1	3	1	2	3	3	6	3	5	5	
Pleurisy, Empyema ...	12	4	8	1	...	...	2	...	...	...	...	...	...	...	1	1	1	
Pulmonary Congestion, Pulmonary Apoplexy ...	3	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gangrene of Lung ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
Asthma ...	11	3	8	...	...	...	...	...	...	...	...	...	...	...	1	1	1	
Pulmonary Emphysema ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of Respiratory System ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total Diseases of Respiratory System ...	601	286	315	57	35	9	11	8	12	6	7	9	10	12	9	17	31	
<b>Digestive System.</b>																		
Diseases of the Mouth and Annexa ...	3	1	2	1	...	...	...	...	...	1	1	...	...	...	...	...	...	
Diseases of the Pharynx, Tonsillitis ...	4	2	2	...	...	...	...	3	...	...	...	...	...	...	...	1	...	
Perforating Ulcer of the Stomach ...	5	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
Inflammation of the Stomach; Gastritis, Gastric Catarrh ...	13	6	7	4	...	...	1	...	...	...	...	...	1	1	...	...	...	
Other Diseases of the Stomach ...	3	3	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	
Epidemic Diarrhœa, Infective Enteritis ...	8	3	5	5	...	...	2	...	...	1	...	...	...	...	...	...	...	
Diarrhœa (not infective), Gastro- Intestinal Catarrh ...	7	6	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	
Enteritis (not infective) Muco-Enteritis ...	5	3	2	5	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gastro-Enteritis (not infective) ...	24	12	12	11	4	2	1	1	1	1	...	1	...	...	...	...	...	
Dyspepsia (under 2 years) ...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Ulceration of Intestines ...	2	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	
Duodenal Ulcer ...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	
Appendicitis, Perityphlitis ...	11	7	4	...	...	...	...	...	1	2	1	1	1	1	2	2	...	
Hernia ...	9	5	4	...	...	...	...	...	...	...	...	...	...	...	2	...	2	
Intestinal Obstruction ...	16	8	8	1	1	...	...	...	...	1	...	...	...	1	...	1	1	
Other Diseases of Intestines ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cirrhosis of the Liver (not alcoholic) ...	7	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
Biliary Calculi ...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of the Liver ...	2	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	
Peritonitis (not puerperal) ...	6	...	6	...	1	...	...	...	1	...	...	1	1	...	...	...	...	
Other Diseases of the Digestive System ...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total Diseases of the Digestive System ...	132	70	62	31	6	2	4	4	4	4	4	3	5	3	4	6	5	
<b>Genito-Urinary System and Annexa (non-venereal)</b>																		
Acute Nephritis ...	15	7	9	...	...	1	...	...	...	3	1	...	2	...	1	1	...	
Chronic Bright's Disease ...	40	22	18	...	...	...	...	...	...	1	...	1	1	2	...	...	...	
Nephritis (unqualified) 10 years and over, Uræmia ...	8	4	4	...	...	...	...	...	...	...	...	1	1	...	...	1	...	
Other Diseases of the Kidney and Annexa ...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Calculi of the Urinary Passages...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Carried forward ...	67	35	32	...	...	1	...	...	...	4	1	2	4	2	1	2	...	



WARD.																								
60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards.	0 to 5	5 and upwards.	North	East	West	Exchange	Bradford	Church	Great Lever	Derby	Hulton	Deane-c-Lostock	Rumworth	Halliwell	Heaton	Smithills	Astley Bridge	Tonge	Dar Lever-c-Br'htmet
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
47	52	55	50	19	10	41	313	19	25	50	10	52	9	28	49	2	4	13	35	4	8	18	20	8
5	3	4	3	...	...	47	37	3	2	9	2	15	7	5	10	3	1	7	8	...	3	4	5	...
3	...	4	1	...	...	2	45	3	2	10	1	6	2	2	3	2	...	4	6	1	1	1	2	1
2	1	8	2	1	...	23	57	5	9	16	3	4	9	3	4	3	1	2	6	1	3	1	5	5
1	1	3	1	...	...	3	9	...	...	1	...	3	...	1	...	...	...	2	1	...	...	...	3	1
...	1	1	...	...	...	1	2	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	1	...	...	...	11	...	1	...	...	1	3	...	...	1	...	1	1	1	1	...	1	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
58	59	75	59	20	10	120	481	30	40	87	17	83	31	40	67	14	6	29	58	7	16	25	36	15
...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...
...	...	...	...	...	...	3	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1
1	...	...	1	...	...	...	5	...	...	1	...	...	...	...	...	...	...	1	2	...	...	1	...	...
1	1	1	...	1	...	5	8	2	1	3	...	2	1	1	...	2	...	...	...	...	1	...	...	...
...	...	1	...	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...
...	...	...	...	...	...	7	1	...	1	...	...	3	...	...	1	1	...	...	1	1	...	...	...	...
1	2	...	...	1	...	1	6	...	1	2	...	...	...	...	3	...	...	...	...	...	...	1	...	...
...	...	...	...	...	...	5	...	...	...	1	...	2	...	...	...	...	...	...	1	...	...	1	...	...
...	2	...	...	...	...	19	5	1	2	3	1	3	2	1	4	...	...	1	3	1	...	...	2	...
...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	11	...	...	3	1	2	1	1	2	...	...	...	...	...	...	1	...	...
3	1	...	1	...	...	...	9	...	...	...	...	1	2	...	2	...	...	1	1	...	...	...	1	1
1	1	1	2	...	...	2	14	...	1	2	...	1	1	...	2	1	...	...	5	1	...	1	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	1	1	...	...	...	...	7	...	2	...	1	1	...	...	1	...	...	...	1	1	...	...	...	...
...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
...	...	1	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
...	...	...	1	...	...	1	5	...	...	1	...	1	...	...	...	...	...	...	2	1	...	...	1	...
1	...	1	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
10	9	6	6	2	...	47	85	4	10	17	3	16	8	5	15	5	...	5	19	8	1	7	7	2
...	1	...	...	...	...	1	15	1	...	4	...	2	...	...	...	1	...	2	2	...	2	...	1	1
7	9	5	3	...	...	...	40	2	2	6	1	2	6	1	3	4	...	1	4	...	2	5	...	1
1	1	...	...	...	...	...	8	...	1	...	...	...	...	1	3	...	...	...	1	...	1	1	...	...
...	...	...	1	...	...	...	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
8	11	5	4	...	...	1	66	3	4	10	1	4	7	2	7	5	...	3	7	...	5	6	1	2







									WARD.																
55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards.	90 to 95	95 and upwards.	North	East	West	Exchange	Bradford	Church	Great Lever	Derby	Hulton	Deane-c-Lostock	Rumworth	Halliwell	Heaton	Smithills	Astley Bridge	Tonge	Dar Lever-c-Br'htmet
11	8	11	5	4	...	...	1	66	3	4	10	1	4	7	2	7	5	...	3	7	...	5	6	1	2
...	1	...	1	...	1	...	...	4	...	...	...	...	...	...	2	...	...	...	1	...	1	...	...	...	
...	...	...	...	...	...	...	...	4	...	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	
1	2	1	4	1	...	...	...	9	...	...	3	1	2	...	...	...	...	1	2	...	...	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	
...	...	1	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
2	11	13	10	5	1	...	1	91	4	7	14	3	7	7	3	11	5	...	4	12	...	6	6	1	2
...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	4	...	...	2	...	...	...	...	...	...	1	...	1	...	...	...	...	
...	...	...	...	...	...	...	...	9	...	...	...	1	...	1	1	...	1	...	3	...	1	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	17	...	...	2	2	...	1	2	2	...	2	1	3	1	1	...	...	
...	2	1	1	...	...	...	...	4	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	1	
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	2	1	1	...	...	...	...	5	...	...	...	...	1	...	...	1	1	1	...	...	...	...	...	1	
...	1	...	...	...	...	...	...	10	...	...	5	...	...	...	2	...	1	...	...	...	...	1	...	1	
...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	1	1	...	...	...	...	...	11	...	1	5	...	...	...	2	...	1	...	...	...	...	1	...	1	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	4	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	1	
...	...	...	...	...	...	...	...	6	...	...	1	...	...	...	...	3	1	...	...	...	...	...	...	1	
...	...	...	...	...	...	...	...	10	...	1	1	...	...	...	...	3	1	...	1	1	...	...	...	1	







DEATH, 1919.

## WARD.

[illegible]



TAB.  
12 SUMMARY OF CAUSE

CAUSES OF DEATH.	Total	SEX.		AGE.														
		M.	F.	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	
General Diseases ...	872	414	458	14	15	13	14	20	63	29	44	40	61	52	48	48	53	
Nervous System, &c. ...	249	124	125	34	8	2	4	3	6	1	3	5	7	4	4	9	12	
Circulatory System ...	287	125	162	...	...	...	...	1	5	1	...	3	4	8	6	9	18	
Respiratory System ..	601	286	315	57	35	9	11	8	12	6	7	9	10	12	9	17	31	
Digestive System ...	132	70	62	31	6	2	4	4	4	4	4	3	5	3	4	6	5	
Genito-Urinary System &c. ... ..	92	52	40	...	...	1	...	...	...	4	3	3	4	2	4	4	5	
The Puerperal State ...	17	...	17	...	...	...	...	...	...	...	1	...	7	3	3	2	1	
Skin and Cellular Tissue	5	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Locomotor System, &c.	11	10	1	...	...	...	...	...	3	1	2	...	...	1	...	...	1	
Malformations ...	10	6	4	10	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diseases of Early Infancy ... ..	116	74	42	116	...	...	...	...	...	...	...	...	...	...	...	...	...	
Old Age ... ..	162	64	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Violent Causes ...	96	68	28	1	4	5	4	...	8	6	7	3	3	4	2	8	5	
Ill-Defined Causes ...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Grand Total ... ..	2652	1295	1357	263	68	32	37	36	101	52	71	66	101	89	80	103	131	



Continued.

DEATH, 1919.

									WARD.																
5 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 and upwards.	0 to 4	5 and upwards.	North	East	West	Exchange	Bradford	Church	Great Lever	Derby	Hulton	Deane-c-Lostock	Rumworth	Halliwell	Heaton	Smithills	Astley Bridge	Tonge	Dar Lever-c-Br'htmet
83	59	37	20	9	...	76	796	20	54	124	26	99	53	58	70	27	12	38	104	13	41	53	59	21	
28	28	29	17	7	1	51	198	16	23	33	4	26	10	13	31	7	1	8	34	1	9	10	19	4	
46	45	44	31	10	5	1	286	9	18	43	9	31	19	13	35	6	6	14	36	6	8	15	12	7	
58	59	75	59	20	10	120	481	30	40	87	17	83	31	40	67	14	6	29	58	7	16	25	36	15	
10	9	6	6	2	...	47	85	4	10	17	3	16	8	5	15	5	...	5	19	8	1	7	7	2	
11	13	10	5	1	...	1	91	4	7	14	3	7	7	3	11	5	...	4	12	...	6	6	1	2	
...	...	...	...	...	...	...	17	...	...	2	2	...	1	2	2	...	2	1	3	1	1	...	...	...	
...	2	1	1	...	...	...	5	...	...	...	...	1	...	...	1	1	1	...	...	...	...	...	1	...	
1	1	...	...	...	...	...	11	...	1	5	...	...	...	2	...	1	...	...	...	...	1	...	1	...	
...	...	...	...	...	...	10	...	1	...	1	...	...	...	...	3	1	...	1	1	...	...	...	1	1	
...	...	...	...	...	...	116	...	3	9	17	3	12	1	9	10	2	3	13	22	...	3	3	5	1	
2	4	47	42	42	25	...	162	7	8	18	3	17	11	9	13	10	7	7	17	4	11	12	7	1	
6	5	7	3	3	...	14	82	7	3	14	6	12	4	4	10	3	...	5	11	1	2	3	7	4	
...	1	...	...	...	...	...	2	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
245	226	256	184	94	41	436	2216	101	174	375	76	305	145	158	268	82	38	125	317	41	99	134	156	58	

TABLE II.

POPULATION, BIRTHS AND DEATHS, 1913-1919.

Year.	Population estimated to middle of each year	Births.			Total Deaths registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of Age.		At all ages	
			Number.	Rate.	Number.	Rate.	Number.	Rate per 1000 nett Births.	Number.	Rate.		
1	2	3	4	5	6	7	of Non-residents Registered in the District. 8	of Residents not Registered in the District. 9	10	11	12	13
1913	183879	3976	23	21.7	2564	13.9	39	370	569	142	2895	15.7
1914	185247	4076	28	22.1	2416	13.0	60	365	485	118	2721	14.6
1915	172514	3597	23	19.5	2390	13.8	44	367	446	123	2713	15.7
1916	169081	3053	14	16.6	2101	12.4	64	380	320	104	2419	14.3
1917	163411	2692	18	14.8	2149	13.1	51	379	291	107	2477	15.1
1918	160619	2736	13	15.2	2468	15.3	51	387	291	105	2815	17.5
1919	177462	3032	20	16.5	2380	13.4	64	336	263	86	2652	14.9

## NOTES RE 1919.

The figure given in column 2 is the estimated **civil** population.

In column 4 is the nett number of transferable births to be added to the figure in column 3.

In column 12 is the number of **civilian** deaths only and in column 13 the **civil** death rate.

The birth-rate given in column 5 is calculated on 184.863, a figure given by the Registrar-General.

## CENSUS, 1911.

Total Population at all ages ...	...	180851
Total Families or Separate Occupiers...	...	40681
Area of District in acres (land and water)	...	15283







TABLE IV.

INFANT MORTALITY DURING THE YEAR 1919.

NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER ONE YEAR OF AGE.

Causes of Death			Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 Weeks	1-3 Months	3-6 Months	6-9 Months	9-12 Months	Total under 1 Year
All Causes	Certified	Uncertified	80	14	15	6	115	48	34	31	27	255
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis ( <i>not Tuberculous</i> )	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	7	4	...	1	12	2	5	7	1	2
Laryngitis	...	...	...	...	2	...	2	...	...	...	...	...
Bronchitis	...	...	...	...	1	...	1	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis	...	...	...	...	4	...	4	...	...	...	...	...
Gastritis	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation	...	...	...	...	1	...	1	...	...	...	...	...
Injury at Birth	...	...	2	...	...	...	2	...	...	...	...	...
Atelectasis	...	...	2	...	...	...	2	...	...	...	...	...
Congenital Malformations	...	...	4	1	1	1	7	2	...	...	...	...
Premature Birth	...	...	51	3	2	1	57	4	...	...	...	...
Atrophy, Debility and Marasmus	...	...	18	6	4	2	30	12	4	1	2	...
Other Causes	...	...	4	...	...	1	5	2	3	3	3	...
Totals	...	...	88	14	15	6	123	48	34	31	27	263

Nett Births Registered during the year—Legitimate, 2851; Illegitimate, 201.

Nett Deaths Registered during the year—Legitimate Infants, 244; Illegitimate Infants, 19.



TABLE V.

**Public Health (Tuberculosis) Regulations, 1912.**

Summary of Notifications during the period from the 29th December, 1918, to the 3rd January, 1920,  
in the County Borough of Bolton.

AGE-PERIODS.	NOTIFICATIONS ON FORM A.													NOTIFICATIONS ON FORM B.					Number of Notifications on Form C.	
	Number of Primary Notifications.													Number of Primary Notifications						
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards.	Total Primary Notifications.	Total Notifications on Form A.	Under 5	5 to 10	10 to 15	Total Primary Notifications	Total Notifications on Form B.		
Pulmonary Males ..	...	...	1	2	10	5	16	24	27	15	5	105	108	...	...	...	...	...	19	140
.. Females ...	...	...	2	4	8	9	22	15	8	5	4	77	79	...	2	1	3	3	19	79
Non-pulmonary Males	2	10	9	11	5	2	6	2	2	1	...	50	50	...	...	...	...	...	6	4
.. Females	1	2	7	9	7	6	6	3	2	1	1	45	45	...	...	...	..	...	1	3
Col. (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)

**Notes re preceding table :**

Primary notifications relate to patients who have not previously been notified in this or former years, either on Form A, or on Form B, in the area to which the return relates.

Cols. 2 to 13. Only those cases which have been notified for the first time during the year on Form A in the area concerned, and which have never previously been notified in the area, either on Form A or on Form B, are included in these columns

Col. 14. This column shows the extent to which duplicate notification occurs on Form A, and all notifications on Form A whether duplicate or not, are included in this column.

Cols. 15 to 18. Only those cases which have been notified for the first time during the year on Form B, in the area concerned, and which have never previously been notified in the area, either on Form A or on Form B, are included in these columns

Col. 19. All notifications which have been made during the year on Form B in the area concerned, whether the cases have previously been notified in the area or not, either on Form A or on Form B, are included in this column.



