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

#### **Contributors**

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1921

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County

Borough



of Bolton.

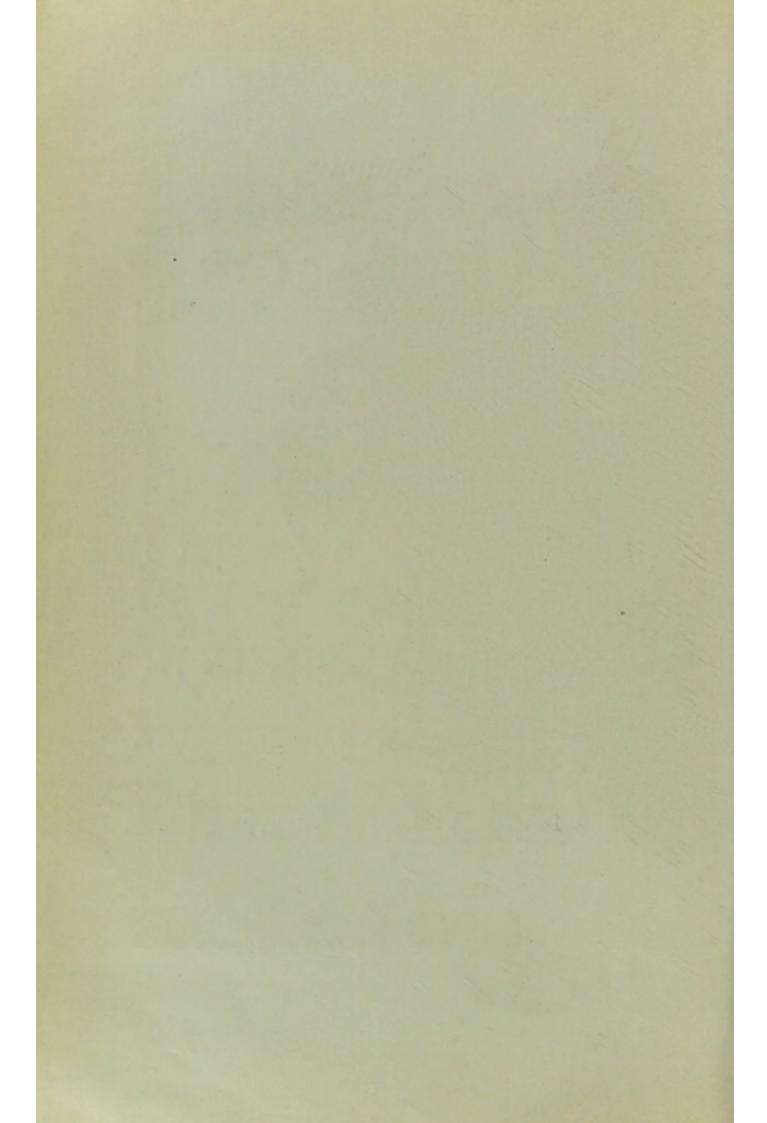
# ANNUAL REPORT

OF THE

# Medical Officer of Health

FOR

1921.



Public Health Department, Bolton.

12th September, 1922.

To the Chairman and Members of the Public Health Committee.

Ladies & Gentlemen,

I beg to submit to you the Annual Report on the Sanitary Conditions of the County Borough of Bolton for the year 1921.

It was on the first day of December of that year that I became Medical Officer of Health; but Dr. Gould, the late Medical Officer of Health, was, on account of illness, absent from duty from the 23rd of May until the termination of his tenure of office. During that period I had to perform all the duties of Medical Officer of Health and Tuberculosis Officer single-handed, Dr. McKeague, the Assistant School Medical Officer, being fully occupied with his school duties.

It has been suggested by the Ministry of Health, that Annual Reports of a full and detailed character (to be known as Survey Reports) should only be produced every fifth year, the reports for the intervening years (designated Ordinary Reports) being of a simpler character. The object is to reduce the time spent by Medical Officers of Health in preparing their reports, and also to reduce the cost of printing them.

Dr. Gould's excellent reports were for many years constructed on identical lines, and, as all records were kept in 1921 with a view to the production of a report similar in plan to those of the preceding year, I have decided that the report for 1921 shall, in form, be identical with its predecessors, any further information asked for by the Ministry of Health being added.

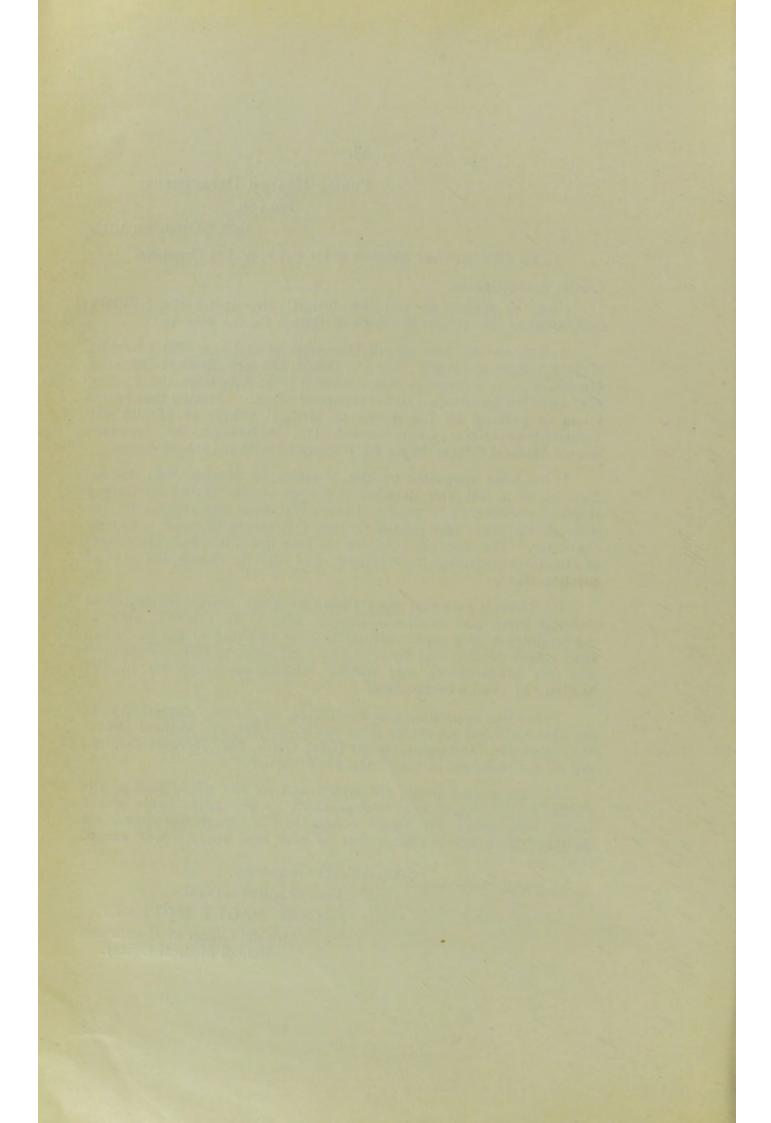
I take this opportunity of expressing my sincere appreciation of the able and loyal assistance given me by the Deputy Medical Officer of Health, Dr. McKeague, by the Chief Clerk, Mr. Herbert Daniels, and all the members of the Public Health Staff.

In conclusion I desire for myself and for the whole staff of the Public Health Department to express our sincere appreciation of the ability with which Dr. Gould conducted the department during his tenure of office, and our hope that he may long enjoy a well earned rest.

I am, Ladies & Gentlemen,

Your obedient servant,

C. W. PAGET MOFFATT,
Medical Officer of Health and
School Medical Officer.



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# COUNTY BOROUGH OF BOLTON.

PUBLIC HEALTH COMMITTEE. The Mayor—Counc. W. Russell, J.P. Chairman—Ald. E. Aspinall, J.P. Vice-Chairman-Counc. P. KNOTT.

Ald, SIR KNOWLES EDGE, J.P. Counc. A. E. Holt, J.P. " G. S. IKIN. J. KEARSLEY. , Dr. E. Monks. S. LOMAX, ., F. STEEL. J. W. MAKANT. Dr. F. Robinson. Counc. B. L. AGNEW. H. Bommer. L. SHAW. E. TAYLOR. J. H. EDGE. 33 Sir T. FLITCROFT, J.P. G. F. VICKERS.

Co-opted Members on the Maternity & Child Welfare Sub-Committee-Mrs. E. Hodkinson, (Representative of the Bolton School for Mothers and Babies' Welcome).

Mrs. L. Aldred, (Representative of the Bolton Midwives' Assn. Mrs. S. E. Jones.

PUBLIC HEALTH & MEDICAL INSPECTION STAFF.

Chief Disinfector John Wilson.

Health Visitors-

School Nurses-1. Miss R. Boddington, 3 years' Cert.

Miss J. Robbins, 3 years' Cert.
 Miss D. Walmsley, C.M.B. & 3 years' Cert.
 Miss S. A. Ramsden, C.M.B., Cert. R. San. I.

2. Mrs. C. Rainbird, 3 years' Cert. 3. Miss A. Marsh, 3 years' Cert. Miss E. Tanner, 3 years' Cert. Miss A. Steeples, C.M.B.

3 years' Cert. (Mat. Hosp.) 6. Miss S. Anderton, C.M.B. & 3 years' Cert.

Matron-Haslam Maternity Home-Miss C. J. BARON. Matron-Borough Fever Hospital-Miss E. BATEMAN.

Sanitary Inspectors-1. EDWARD OAKES, Cert. R. San. I. 2. THOMAS ORMROD, Cert. R. San. I. 3. Fred S. Roscoe, Cert. R. San. I.

4. HAROLD THOMAS OGDEN, Cert. R. San. I. 5. Frank Markland, Cert. R. San. I. and

Cert. for Food.

6. Charles J. Dawson, Cert. R. San, I.

Chief Clerk and Sanitary Inspector-

HERBERT DANIELS, Cert. R. San. I.

Veterinary and Chief Meat Inspector-W. H. BRIDGE, M.R.C.V.S. Public Analyst and Bacteriologist—

HARRY HURST, B.Sc. Lond. and Sheff., F.I.C. Assistant Medical Officer of Health and Assistant School Medical Officer-EVELYN D. BROWN, M.B., CH.B., D.P.H. Liverp.

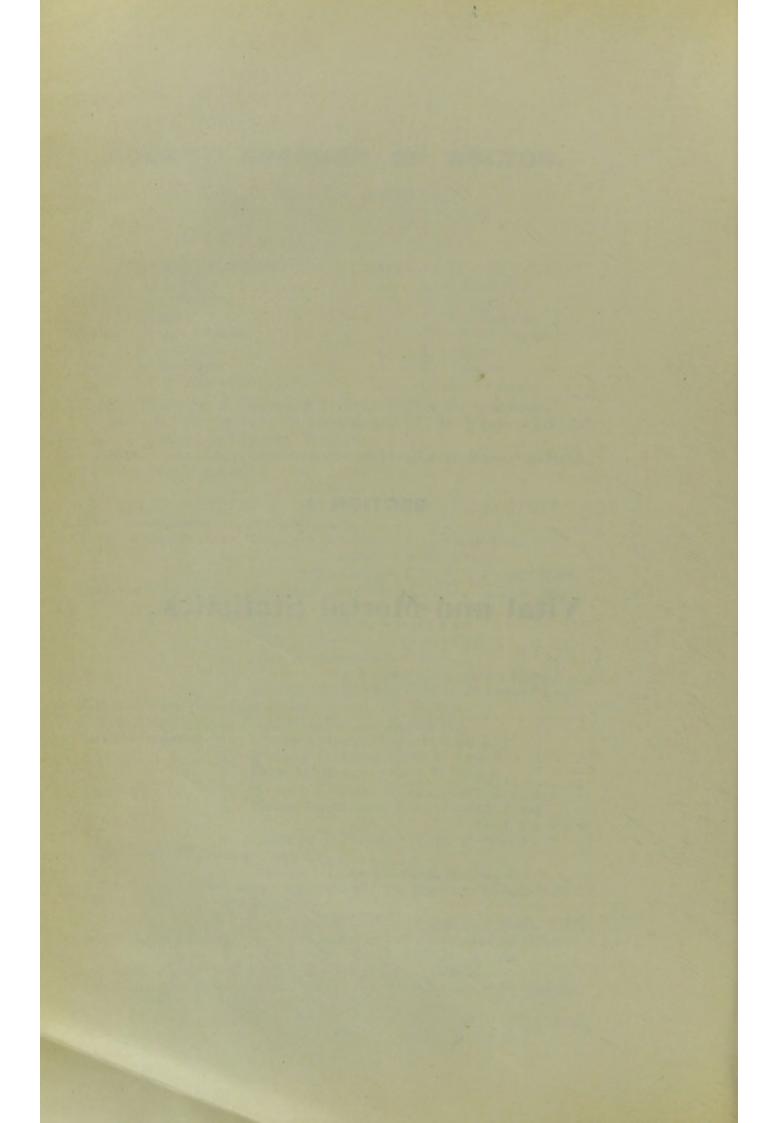
Tuberculosis Officer and Deputy Medical Officer of Health— JOHN McKeague, L.R.C.P., L.R.C.S. Edin., D.P.H. Dublin.

Medical Officer of Health and School Medical Officer --

C. W. Paget Moffatt, M.A. Lond., M.B., B.C., D.P.H., Cantab. M.R.C.S. Eng., L.R.C.P. Lond.

#### SECTION I.

Vital and Mortal Statistics.



# SUMMARY OF VITAL AND MORTAL STATISTICS 1921.

Position Lat. 53° 35' N., Lon. 2° 27' Elevation above sea level 230ft. to 1450' Geological Formation: Boulder Clay and Sand over Co	ft.
Area in Acres 152	79
Population (Census 1921) 1786	78
Population (Census Correction by Registrar	
General and mid-yearly estimated	
population, 1921) 18220	00
Density 11	.9
New Houses Certified, 1921 22	25
Estimated No. of houses in the Borough 431;	36
Rateable Value at 31st March, 1922	25
Sum represented by a penny rate (1921-1922) £3711-1	-9
Births 383	31
Birth-rate 21	.0
Deaths 234	19
Death-rate (corrected for Institutions) 12	8
Average Death-rate (1912-1921) 14	.7
Infantile Mortality	36
Epidemic Death-rate (seven chief diseases)	62
Diarrhœa and Enteritis (under 2 years), Death	
rate per 1000 Births 13	.5
	88
	20
	.5
Rainfall (Av. 1887-1920-42.924") 39.12	411
96 Great Towns Birth-rate 23	.3
96 Great Towns Death-rate 12	.3
	87
96 Great Towns Diarrhœa and Enteritis (under	
2 years) Death-rate per 1000 Births 19	.3
England and Wales Birth-rate 22	
England and Wales Death-rate 12	
	83
England and Wales Diarrhoea and Enteritis	
(under 2 years), Death-rate per 1000	-
Births 15	.2

## Population.

The census of 1921, as originally planned, should have taken place on the 24th of April. It was unavoidably postponed until the 19th of June, a time when the population of the town was undoubtedly reduced in number by the usual summer holiday exodus, a movement which had begun unusually early on account of the abnormally fine weather. The Registrar General, in order to correct this source of error, has made an adjustment by which the mid-yearly population for 1921 is fixed at 182,200. All calculations for the year 1921 which depend on the population are based on this corrected figure.

The estimated populations of practically all areas throughout the country have been shown by the census of 1921 to be very misleading. The estimated population of Bolton for 1920 was 184,533, a figure which, in the light of the census of 1921, is quite obviously too high.

## Birth-rate and Births.

3,831 births were registered during the year, of which 1,953 were males and 1,878 females. This is equal to a birth-rate of 21 o which is higher than the average for the last ten years. The birth-rate as given by the Registrar General was 21.4.

The illegitimate births numbered 192 or 5.0 per cent of the total births. 16 of the illegitimate births occurred in the Townleys Hospital.

180 stillbirths were notified during the year.

# Death-rate and Deaths.

The death-rate for 1921 was 12'8 (as given by the Registrar General, 12'9), the lowest death-rate recorded for Bolton. The lowest death-rate for Bolton prior to 1921, was the death-rate for 1920, which was given as 13.6. It was calculated, however, on an estimated population which was undoubtedly greater than the actual population and the figure 13'6 is therefore too low.

2,349 deaths (1,155 males and 1,194 females) were registered of Bolton residents. This included 392 deaths of persons whose usual or fixed residence was in Bolton but who died in some institution or residence outside Bolton, and excluded 81 non-residents of Bolton who died in the town.

290 Bolton residents died in Townleys Hospital, 49 in Lunatic Asylums, 126 in Bolton Infirmary, 27 in Borough Hospitals and 53 in other places outside the Borough. Of the 81 deaths in Bolton of non-residents, 72 occurred in the Bolton Infirmary.

The death-rates varied from 16'3 in East Ward to 9'7 in Darcy Lever-cum-Breightmet Ward.

# Bolton Census Populations, &c.

Year.	Census Population.	Birth-rate. (Calculated on estimat		Infantile Mortality
1891*	115,002 (Old Boi 146,487 (Extende	rough) d Borough) 33'9	21.6	165
1901	168,215	27.5	18.3	172
1911	180,851	22.9	16.3	160
1921	178,678	21.0	12.8	96

<sup>\*</sup>Borough extended in 1899.

6
POPULATIONS, BIRTH-RATES, DEATH-RATES, &c., IN WARDS, 1921.

WARD.		Estimated Population.	Birth-rate.	Death-rate.	Pul. Tub. Death- rate.	Infantile Mortality.
West		 26679	22'3	13.1	1.1	93
Halliwell		 22009	20.9	10.3	.4	67
Bradford		 19840	21'7	13'3	1.1	118
Derby		 19188	25'9	15'0	1.0	102
East		 9894	25.0	16.3	1'4	108
Rumworth		 8998	25.8	11.8	1.1	77
Church		 8414	13.7	11.7	.9	129
North		 7462	17.8	14'2	1.0	150
Exchange		 4632	14.8	15'7	2.2	217
Old Borough		 127116	21'9	13.2	1.0	101
Great Lever		 12351	21.3	12.2	'2	79
Tonge		 9823	19.7	12.6	.6	67
Astley Bridge		 8344	19'5	10.0	-7	85
Smithills	***	 7104	15.6	13.3	.9	81
Hulton		 6302	17.7	12.6	ı.	142
Deane-cum-Lostock		 4215	16.6	11.3	.7	71
Darcy Lever-cum-Bre	ightmet	 4115	20.8	9.7	-	58
Heaton	***	 2830	15.1	13.4	.3	69
Added Area		 55084	18.9	12.1	'4	82
Extended Boro	ugh	 182200	21'0	12.8	.88	96

# BIRTH-RATE, DEATH-RATE AND INFANTILE MORTALITY IN CHIEF LANCASHIRE MANUFACTURING TOWNS.

Figures taken from the Annual Summary of the Registrar General)

1921.

	Birth-Rate.	Death-Rate.	Infantile Mortality.
England and Wal	les 22'4	12.1	83
96 Great Towns	23.3	12.3	87
-			
Bootle	. 28.1	12.1	84
Warrington	. 26.5	12.1	94
St. Helens	. 29.2	12.6	105
Blackburn	20.1	12.7	107
BOLTON	. 21.4	12.9	96
Bury	. 19.7	12.9	84
Rochdale	. 19.1	13.2	88
Salford	. 25.2	13.4	101
Preston	. 24.1	13.4	112
Manchester	. 24.8	13.6	94
Burnley	. 22.9	13.6	117
Wigan	. 28.1	14.0	115
Liverpool	27.4	14.3	105
Oldham	. 21.7	14.6	105

Population, Densities, Birth-rates, Death-rates and Infantile Mortality in Previous Years.

Year,	Population	Density	Births	Birth- rate	Deaths	Death-rate	Infantile Mortality
1773 1791-1800 1801-1830	5600 14437 28349	3.0 7.8 15.3					
*1831-1860	54463	29.5					
1861-1870	75999	41.5				29.4	
†1871–188o	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	30.0	2795	20'2	173
1901-1905	171065	11.1	4668	27.2	2968	1713	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	10.2	2749	15.2	2804	17:4	105
1919	177462/	11.6	3052	16.2	2652	14'9	86
1920	184533	12.0	4209	22.8	2528	13.6	98
1921	182200	11.0	3831	21.0	2349	12.8	96

<sup>\*</sup> Incorporation in 1838 with 48,000 population and 1840 acres.

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

<sup>†</sup> In 1899 Borough extended by 12,922 acres and 38,000 added to the population.

# SUMMARY OF THE PRINCIPAL CAUSES OF DEATH, 1921.

50.	MMARI OF THE TRINCIPAL	CAUSES	Or	DEATH, 19	121.
				No. of Deaths.	Per cent. of Total Deaths.
GENERAL	Diseases.				
(1)	Diphtheria			21	.89
(2)	Whooping Cough			25	1.06
(3)	Influenza			45	1.91
(4)	Pulmonary Tuberculosis		***	161	6.85
(5)	Other Forms of Tubercule			37	1.57
(6) (7)	Cancer Other General Diseases	•••		214	9,11
(7)	Other General Diseases			105	4.46
Nervous	S System.				
(1)		poplexy		110	4.68
(2)	Infantile Convulsions			31	1.31
(3)	Other Nervous			91	3.87
0					
	TORY SYSTEM.				
(1)	Organic Disease of Heart			200	8.51
	Diseases of Arteries			114	4.85
(3)	Other Circulatory			59	2.21
RESPIRA	TORY SYSTEM.				
(1)	Bronchitis			235	10.00
	Pneumonia (all forms)			208	8.85
(3)	Other Respiratory			19	.80
				-	
DIGESTI	VE SYSTEM.				
(1)	Diarrhœa and Enteritis			77	3'27
(2)	Other Digestive			100	4.25
GENITO-	URINARY SYSTEM.				
(1)	Chronic Bright's Disease			49	2.08
	Other Genito-urinary			46	1.95
1				4	- 33
DISEASE	S OF EARLY INFANCY.				
* (1)	Premature Birth		***	73	3.10
(2)	Atrophy, Debility, &c. Other Diseases of Early			53	2.25
(3)	Other Diseases of Early	Infancy	1	21	.89
OLD AC	GE			115	4.89
VIOLENT	r Causes			80	3.40
MISCELI	LANEOUS CAUSES			60	2.55

# Infantile Mortality.

370 or 15.7 per cent. of the total deaths were those of children under one year of age, equal to an infantile mortality of 96 per 1000 births. The rates varied from 58 in Darcy Lever-cum-Breightmet to 217 in Exchange Ward.

CHIEF CAUSES OF DEATH UNDER ONE YEAR OF AGE.

		1916	1917	1918	1919	1920	Av. 1916 to 1920	1921
Total Deaths		 320	291	291	263	416	316	370
Diarrhœa and Enteritis		 31	17	29	23	40	28	49
Respiratory		 77	42	57	57	99	66	68
Premature Births and Congenital Defects	}	58	72	63	71	82	69	89
Atrophy and Debility		 57	56	41	45	61	52	53
Convulsions and Meningi	itis	 38	24	22	32	35	30	26
Tuberculous Diseases		 7	10	6	2	7	6	7
Epidemic Diseases (excluding Diarr.)		 12	33	34	7	34	24	19
All other Causes		 40	37	39	26	58	40	59

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

Quinquennium. Average rate.		erage rate.	Quinquennium.	Average rate.
1876-1880		171	1916	 104
1881-1885		169	1917	 107
1886-1890		173	1918	 105
1891-1895		185	1919	 86
1896-1900		173	1920	 98
1901-1905		157	1916-1920	 100
1906-1910		134	1921	 96
1911-1915		128		

# Maternal Deaths in, or in consequence of Childbirth.

There were 17 such deaths, of which 6 were due to sepsis.

# Mortality from Epidemic Diseases.

II3 deaths were registered from the seven chief epidemic diseases. This is equal to a death-rate of .62.

Causes of Death from Epidemic Diseases.

		1917	1918	1919	1920	1921
Smallpox		_	-	_	I	_
Scarlet Fever		8	2	4	2	7
Diphtheria and Memb. Cr	oup	22	26	61	35	21
Enteric and Continued Fe	ver	7	5	5	6	3
Measles		134	I	18	27	5
Whooping Cough		8	85	-	34	25
Diarrhœa and Enteritis un	nder					
2 years of age		25	33	27	41	52
Erysipelas		2	I	3	7	2
Puerperal Fever		1	2	. 1	5	6
Cerebro-spinal Fever		-	2	2	-	_
Influenza		19	367	301	70	45
Pulmonary Tuberculosis		189	198	173	154	161

DEATH-RATES FROM THE SEVEN EPIDEMIC DISEASES, AND PULMONARY TUBERCULOSIS, 1866-1921.

,	Year.	Small- pox.	Scarlet Fever.	Diph- theria and Memb Croup	Fever.	Measles.	Whooping Cough.	Diarrhœa& Enteritis (under 2 yrs,)	SevenChief Epidemic.	Pulmonary Tuber- culosis.
Av 186	66-1870	 .06	1'40	.03	-68	-86	.55	1.88	210	
	71-1880		1.10	.03	'50	-68	.71	1.74	5.7	
	81-1890		.27	.07	.21	.73	-	1.10	4/	1.67
	1-1900	 100000	.19	.07	.28	.62	'53	1.58	3'02	1.52
	01-1010	 .005	'21	14	.18	.32	-28	-77	1.00	1.26
	11-1915	 _	*04	*20	.08	'32	.20	.71	1.60	'95
1916	***	 -	.05	.II	.05	.05	.12	'22	.66	1'07
1917		 -	'04	.13	'04	.82	'04	'15	1.24	1'15
1918		 -	'01	,19	'03	-	'53	,20	.94	1.23
1919		 -	#02	'34	'02	.IO	-	*15	.64	.97
1920	***	 '005	.01	.18	.03	.14	.18	122	'79	.83
1921	***	 -	.03	.II.	10'	'02	.13	*28	.62	.88

#### 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		2.49	1.63	.35	.01
2.	St. Helens		3'77	2.27	.21	'02
3.	Bury		4.16	2.45	-86	.01
4.	Burnley		4.44	1.57	1.98	.12
5.	Wigan		4'46	2.72	.56	'32
6.	BOLTON		4.72	3.26	1.14	.04
7.	Preston		5.07	3.06	1,46	.10
8.	Rochdale	,	5.13	.3.90	.74	'02
9	Warrington		5.16	3'43	1.13	•06
10.	Liverpool		5.86	3.74	1*44	.03
II.	Oldham		6.48	5.03	•73	.07
12.	Bootle		6:84	4.32	2.22	.05
13.	Manchester		9.54	7.28	1.39	12
14.	Salford		9.65	7.44	1.35	•17

NOTIFIABLE DISEASES DURING THE YEAR 1921.

1	At all asses	208 3 208 3 161 161 2 2 208 3 17 17 17 20 3 37 37 37 37 37 37 37 37 37 37 37 37 37 3
	over over	
	45 to 65	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	35 to 45	11 11 11 11 11 11 11 11 11 11 11 11 11
	20 to 35	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
00	15 to 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Deaths	or or	4 H H H H H H 4 W H 4
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Cases Notified	to to	482 6 1 47, 1 1 2 1 1 4 4 8 4 5
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	Under 1	32 н 2 н н н н 35 н 3 н 3 н 3 н 3 н 3 н 3 н 3
		gica
	Disease.	Diphtheria  Scarlet Fever  Enteric Fever  Puerperal Fever  *Pneumonia  Erysipelas Ophthalmia Neonatorum Malaria  Encephalitis Lethargica  Acute Poliomyelitis  Tuberculosis:—  *. Pulmonary  *.
1		L PRESCETTERO

\* The cases notified are Acute Primary and Acute Influenzal but the deaths include all forms of Pneumonia.

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NOTIFIABLE DISEASES DURING THE YEAR.—continued.

	Deaths		8 of the Cases notified during 1921 were dead when a census was taken on 31st May, 1922. Only one of the above died of Specific Disease
7,	Total		
	Vision		
	Vision Unimpaired		35
	Treated	In Hospital	16 (15 in Bolton Infirmary and 1 in Townleys Hospital)
Cases	Tr	At Home	61
		Notified	35
	Ophthalmia Neonatorum		

DISTRIBUTION OF NOTIFIED DISEASES IN WARDS, 1921.

W	ARDS,		1	Scarlet Fever.	Diphtheria and Memb. Croup.	Enteric.	Puerperal Fever.	Erysipelas,	Total.	Pulmonary Tuberculosis.	Non-pul. Tuberculosis.	Ophthalmia Neonatorum,	Pneumonia.	Malaria.	Acute Poliomyelitis.	Encephalitis Lethargica.
West				82	20	4		10	116	22	6	6	10			3
Halliwell .				43	20		1	13	77	17	7	5	10	I		
Bradford .				58	8	***	I	5	72	16	21	2	14		***	
Derby .				59	18		1	7	85	11	6	II	12	1		
East .				16	8			10	34	20	10	3	4			T
Rumworth				50	12	1	1	6	70	10	3	1	12	I	I	1
Church .			***	25	7	1		6	39	7	4	2	I	****		
North .				19	7	1		4	31	5	2		10			1
Exchange .				10	2		***		12	11	2	2	I			
Old Bo	rough	1		362	102	7	4	61	536	129	61	32	64	3	1	6
Great Lever				75	7	1	1	2	86	6	6		7			I
Tonge .				52	10		1	3	66	7	3					
Astley Brid	ge			29	4	***	1	6	40	6	2	1	9			
Smithills .				11	5			3	19	6	4	***	3			
Hulton				38	5			5	48		2	I	15			
Deane-cum-	Losto	ock		15	12			6	33	2						
Darcy Lever	r-c-B	reigh	tmet	6	3				9	2	1	1	4			
Heaton .		***		3	4			I	8	2			1			
Added	Area			229	50	1	3	26	309	31	18	3	39			1
Extende	ed Bo	roug	h	591	152	8	7	87	845	160	79	35	103	3	1	7

. 19

# INFECTIOUS DISEASES NOTIFIED FROM 1882 TO 1921.

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 Neonatorum.	Measles.	Pneumonia Ac.Prim.&In	Malaria.	Dysentery.	Cerebro- spin. Men.	Acute Pol- iomyelitis	Encephalitis
1882-1890	34	582	34	105	9	3	.5	-	767	6:7	-	-	-	-	-	-	+	-	-	-
1891-1900	6	642	57	182	2	8	'I	1	898	6.9	-	-	-	-	-	-	-	-	-	-
1901-1910	14	951	113	165	-	10	-	82	1335	7.4	170	-	-	-	-	-	-	-	-	-
1911-1915	-	408	150	57	-	6	-	108	729	4.0	297	96	27	-	-	-	-	I	-	-
1916	-	312	114	39	-	5	-	87	557	3.5	233	69	28	-	-	-	-	-	_	-
1917	-	374	92	24	-	I		54	545	3.3	234	45	23	3416	-	-	-	I	-	-
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	I	3	-	-
1920	2	541	175	12	-	9	-	78	817	4.4	151	64	51	-	140	74	-	-	-	-
1921	-	591	152	8	-	7	-	87	845	4.6	160	79	35	-	103	3	-	-	1	7

First Year Notification 1878. Isolation Hospital Established 1884. Borough Extended 1899.

# ENTERIC FEVER IN BOLTON, 1881-1921.

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	.10	22.3
Av. 1891-1895		153	1.50	31	.26	20*4
Av. 1896-1900	***	209	1.21	42	'25	20'1
Av. 1901-1905		182	1.09	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
1920		12	'06	6	'03	50.0
1921		8	*04	3	'01	37.5

# Phthisis (Pulmonary Tuberculosis).

161 deaths were registered from this disease, including those Bolton residents who, died in institutions outside the Borough. The death-rate is '88 per 1000 inhabitants, which is next to the lowest recorded; the lowest being '83 in 1913 and 1920.

The age and sex distribution are shewn below :-

	1	1					A	ges.	
Sex.	Total	Under 5	5-15	15-25	25-35	35-45	45-55	55-65	65 and upwards
Males	79	2	2	II	12	17	21	11	3
Females	82	4	4	23	15	19	II	3	3
Total	161	6	6	34	27	36	32	14	6

The	occupations	of those	who	died	were	as f	ollows:-	
	Weaving							

Spinning

Spinning	***	****		7.70
Other Cotton Operati	ves			13
Bleaching and Printin	ng		***	4
Metals, Machines and	d Imple	ments		7
Coal Mining		***		9
Building				3
Conveyance of men a	and good	ds		4
General Labourers				19
Food, Drink and Tob	acco			I
Dress, etc				2
Clerks				2
Household Work				33
School Children				3
Miscellaneous occupa	tions			18

25

161

No occupation or occupation unknown ...

DEATHS FROM PULMONARY TUBERCULOSIS IN BOLTON IN PREVIOUS YEARS.

			ts in Publ out of Bo			Institu- Borough.	Private		Death
Year.		Townleys Hospital & Fishpool W'rkho'se	Lunatic Asylums	Others.	Resi- dents.	Non- Resi- dents.	Houses.		
47.650								9733	
Av. 1901-05		31	10.8	'4	1.5	'2	194	237	1.38
Av. 1906-10		42	8.4	'2	1.5		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	1.12
1918		29	30	3	6	1	130	198	1.53
1919	***	19	24	7	8		115	173	.97
1920	***	41	11	3	7	1	92	154	-83
1921		32	8	3	11		107	161	-88

## Notification of Tuberculosis.

During 1921 the number of persons who died of pulmonary tuberculosis in Bolton was 161. Of these, 64 or 39%, had not been notified during life.

During the same period there died of non-pulmonary tuberculosis 37 persons, of whom, 23 or 62%, had not been notified during life.

Of the total deaths from tuberculosis (198), 87 or 43% were not notified as suffering from the disease before death.

I am satisfied that a certain number of these unnotified cases are to be accounted for by the fact that, when the cause of death has been obscure, a diagnosis of tuberculosis is made after death. This however, leaves the majority unaccounted for and I have addressed to all medical practitioners in the area of the County Borough of Bolton, a letter drawing their attention to the obligation imposed upon them of notifying all cases of tuberculosis.

# Tuberculosis.

Notificati	ONS.		1	PULM	ONAR	y Tu	JBERG	CULOS	sis.			
Ages.		o to I	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 upw'ds
Males Females	•••	I	I	3	4	6 9	8 6	11 25	17	21 5	15	2
Males			 on-P	85 ULMO	ONARY	Tu		uLosi	 IS.		. 7.	5
Ages.		o to I	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 upw'ds
			-		8	2	2	2	2		I	I
Males Females		1 2	8 5	12	4	5	6	2	2	1	I	

# Admissions to, and Discharges from Institutions.

Institution.	Adm	nissions.			Di	scharges.
Meathop	***	45				50
Wilkinson		38				41
Borough Hospital		69				72
Townleys Hospital		II				10
Birkdale Hospital		3				3
Heswall		18				5 8
Infirmary Manchester & Salfe	ord.	18				8
Hospital for Skin		2				
Manchester Royal I		I				2
David Lewis North		*				1
Hospital		I				I
		79.00		***		(1)
Тив	ERCULOSIS	DISPE	ENSARY.			
Total Attendances—In	sured					1487
	ninsured					1015
						2502
	CONSULT	TATIONS	3.			
Total number sent for	consultat					238
		U	ninsure	1		116
						7
Findings at consultation	5					354
Findings at consultation						
Number found to have	e pulmona	ry tube	erculosis	· · ·		133
Number found to hav	e non-puli	nonary	tubercu	ilosis	***	23
Number in whom pul						00
but not definitely di Number in whom no			····			68
Number in whom no	evidence c	or tuber	culosis	was lot	ind	130
Tu	BERCULIN	DISPE	NSARY.			
Number of cases trea	ted					51
Number of attendanc						1266
				1 111		
Only cases of surgi	cal tuberc	ulosis a	ire treat	ed with	1 tut	perculin.

Only cases of surgical tuberculosis are treated with tuberculin. Excellent results have been obtained in many cases. No treatment of symptoms with drugs is given at the Tuberculosis Dispensary. Only special forms of treatment, such as tuberculin, colloid calcium etc., are administered.

	SERVICEMEN.	
Number of ex-servicemen w		er-
culosis Dispensary		159
Total attendances for ex-ser		917
Number of ex-servicemen r		rd
for opinion as to tubercule		91
Number found to be suffering		35
Number of those in whom n	o evidence of Phthisis w	as
found		50
( )		50
Number of doubtful cases ke	ept under observation	
Number of doubtful cases ke		
Number of doubtful cases ke	of Tuberculosis.  TREATMENT PROVIDED	6
Treatment Applications. Insured 219	of Tuberculosis.  TREATMENT PROVIDED Residential	6
Number of doubtful cases ke  Treatment  Applications.	of Tuberculosis.  TREATMENT PROVIDED	6
Treatment Applications. Insured 219	of Tuberculosis.  TREATMENT PROVIDED Residential	6
found Number of doubtful cases ke  Treatment  APPLICATIONS. Insured 219 Uninsured 51  Total 270	of Tuberculosis.  TREATMENT PROVIDED Residential Domiciliary  Dispensary	6
found Number of doubtful cases ke  Treatment  APPLICATIONS. Insured 219 Uninsured 51	of Tuberculosis.  TREATMENT PROVIDED Residential Domiciliary  Dispensary Cancelled	6
found Number of doubtful cases ke  Treatment  APPLICATIONS. Insured 219 Uninsured 51  Total 270	of Tuberculosis.  TREATMENT PROVIDED Residential Domiciliary  Dispensary	6 187 44 6

Acc OF

			Under			
Institution.	Beds.	Total,	Ins.	Unins.	31st Dec. 1921.	
Meathop Sanatorium	16	45	42	3	16	
ATTITUDE OF THE PROPERTY OF TH	12	38	37	1	II	
D - 1 II - mital	24	69	52	17	22	
arm I Transital	3	II	IO	I	I	
*Diable Hemital	2	3	3		I	
ATT	. 3	3 18	***	3	3	
*Infirmary	12	18	6	12	10	
*Manchester and Salford Hospita	al				- Andrew	
		2	2			
*Manchester Royal Infirmary .		I		I		
*David Lewis Northern Hospita	al	I	***	I		
P.C. Commission		52	17	35	29	
The state of the s		44	44		60	

# • Paid for per user.

ASSIST	ANCE GIVEN TO NECESS	ITOUS ?	<b>TUBERC</b>	ULOUS	PATIENTS:-
	Total number of patient				93
2.	Average time receiving	assistar	nce		2½ months.
	Amount of milk given				7,299 pts.
4.	No of eggs given	***	***		275
5.	Malt and Oil given				103 lbs.

## Venereal Diseases.

Clinics are held at the Treatment Centre established in the Public Health Offices at the following times:

Monday ... 7-0 p.m. Males.

Tuesday ... 7-0 p.m. Males.

Wednesday ... 7-0 p.m. Thursday ... 7-0 p.m. Females.

Patients who are unable to attend the evening clinics can receive treatment during the day by arrangement.

Irrigation of cases of gonorrheea is carried out at 10 o a.m. on Monday, Wednesday and Friday for males, and on Tuesday at 10-0 a.m. and Thursday at 2-30 p.m. for females.

Pathological specimens are examined under the direction of Prof. Dean at the Pathological Dept. of the University of Manchester.

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

12 Medical practitioners were supplied with 290 doses of Salvarsan substitutes for patients under their care. 105 tests were made for private practitioners for the Wassermann reaction and 6 smears examined for gonorrhea.

The following table shews the number of Bolton patients who were dealt with at Treatment Centres in other towns.

	Manchester & Salford Hosp, for Skin Diseases.	St Lukes Hospital	Royal Infirmary Manchester.	Ancoats Hospital.	St. Mary's Hospitals Manchester	Dispens- ary Bury.
No. of Persons.	5	3	8	2	I	I
Attendances.	71	14	116	2	1	3
Doses of Salvars						
substitutes given	. 2		I			
Tests-Wasserman	on. 6	I	. 4		I	
Gonorrhœ			9	2		
Spirochete	es I			***		

The tables on pages 26 and 27 show the work carried out at the Bolton Treatment Centre.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT BOLTON PUBLIC HEALTH OFFICES DURING THE YEAR ENDED THE 31ST DECEMBER, 1921.

	Syphilis.		yphilis. Soft Chancre			Gonorr- hœa.		Conditions other than Venereal.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1. §Number of persons who, on the 1st January, 1921, were under treatment or observation for: 2. Number dealt with during the year in the out-patient Clinic for the first time and	320	204	7		296	29	10	1	633	234	
found to be suffering from : Syphilis only	143	84				1			143	84	
Soft chancre only			7		***				7		
Gonorrhœa only	***	***			192	31	***	***	192	31	
§Syphilis and gonorrhœa	II	3			II	3	200		22	6	
Conditions other than venereal		***			***	***	127	58	127	58	
Total—Item 2	154	87	7		203	34	127	58	491	179	
TOTAL—Items 1 and 2	474	291	14		499	63	137	59	1124	413	
3. §Number of persons who ceased to attend the out-patient Clinic											
(a) before completing the first course of treatment for  (b) after one or more courses but before completion of treatment	54	20	1		95				150	20	
for (c) after completion of treatment but	25	17	***		***		•••	***	25	17	
before final tests as to cure of 4. Number of persons transferred to other Treatment Centres after	41	44	3		37	I	***		81	45	
5. Number of persons discharged from the out-patient Clinic after completion of treatment	7	5	2		9	1			18	6	
and observation for 6. Number of persons who on the	10	12	I		35	3	116	53	162	68	
1st January, 1922, were under treatment or observation for	337	193	7		323	58	21	6	688	257	
Total—Items 3 4. 5, and 6	474	291	14		499	63	137	59	1124	413	
7. Total attendances of all persons at the out-patient Clinic who were suffering from:—  8. Aggregate number of "In-patient days" of treatment given to	3308	1936	89		3360	737	285	128	7042	2801	
persons who were suffering from :—	104	36							104	36	
. Examinations of Pathological mate	erial:	_		Spiro- hetes	- 0	ctecti cono- occi.	0	other organ- sms.	Wa	or sser- ann ction	
(a) Specimens which were examine the Medical Officer of, the Centre	Tre	atme	nt			80					
(b) Specimens from persons attended Treatment Centre which were amination to an approved laborated	sent	for e	x-		1					54	

<sup>§</sup> The number of persons suffering from two or more venereal diseases is entered under the heading of each disease in the vertical column, and accounted for under each disease throughout the Return,

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

	1.1501						
Name of County or County Borough.	Bolton C.B.	Lancs. C.C.	Bury C.B.	Blackb'n C.B.	Wa'in'tn C.B.	Wigan C.B.	TOTAL
A. Number of persons from each area dealt with during the year at or in connection with the out-patient Clinic for the first time and found to be suffering from:—							
†Syphilis	153	85	2	***	I	***	241
†Soft chancre	6	I	***	***			7
†Gonorrhæa	167	57	I	I		I	237
Conditions other than Venereal	131	53	1				185
TOTAL	457	206	4	1	1	1	670
3. Total number of attendances at the out-patient Clinic of all patients residing in each area		3321	136	14	8	I	9843
days" of all patients residing in each area		52	***				140
N 1 11 01 01 11							
O. Number of doses of Salvarsan substitutes given in 2. In-patient	1810	1231	46		3		3090
the :— Dept. to patients residing in each area	6						6

stitutes used in the treatment of syphilis and the usual initial and final doses.

treatment usually administered to a case of Syphilis of each of the types usually dealt with at the Treatment Centre.

deciding as to discharge of patients referred to in Item 5 on previous page.

E. Give the names of Salvarsan sub- Novarse nobillon and occasionally Neo-Salvarsan. For Males .- '45 NAB. (initial dose). 6 NAB. (final dose). For Females.—30 NAB. (initial dose). 45 NAB. (final dose).

F. State the amount and kind of For all sores, primary etc., local treatment is given: Lotio Nigra, Pulv. Cal., and Zno, For the constitutional invasion we use NAB, (for specially resistant cases Neosalvarsan of Meister Lucius Bruning, Frankfort. 10 doses usually given;

case. Mercury is given throughout the course as grey powder given by mouth. All NAB. and Neo-salvarsan is given intravenously.

G. State the nature of tests applied in In the case of Syphilis, patients have not been discharged until at least 3 blood tests at 3 to 6 monthly intervals without treatment have proved negative.

In the case of Gonorrhoa, patients are not discharged until they have been free for 6 weeks from discharge and threads in the urine. If considered desirable prostatic massage is done, and smear examined.

† 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, 1921.

		Admissions.		Deaths in Hospital
Total		 	459	27
Scarlet Fever		 	299	4
Diphtheria		 	56	II
Enteric Fever		 	7	
Pulmonary Tubercu	losis	 	77	10
Other Diseases		 	20	2

## SECTION III.

- 1. Maternity and Child Welfare.
- 2. Haslam Maternity Home and Infant Hospital.
- 3. Control of Midwives.

SHE MOITONS

ie Maternity and Child Wellare.

2 Baston Materialy Bone and Calent Baselint.

about the least of Historical

# Maternity and Child Welfare.

	TON							
T	ж	т	D.	Page 1	LF	0		
1 +	J.	ш	ES.	ж.	п	a	-	-

Registered	(1)	Legitimate	3639,	(2)	Illegitimate	192,	Total	3831
Notified	(1)	Live Births	3801,	(2)	Stillbirths	180,	Total	3981
		By Midwives						
	-				& Doctors	576,		

(3) By Registrars 159.

## 2. DEATHS OF INFANTS UNDER I YEAR OF AGE:-

Number	(1)	Legitimate	354.	(2)	Illegitimate	16,	Total	370
Infant Mortality	(1)	Legitimate	97,	(2)	Illegitimate	83,	Total	96

# 3. VISITS BY HEALTH VISITORS.

Primary birth enquiries		***	****	3747.
Visits to Children, 1-5 years		***		2302
Primary visits to expectant moth	ers			518
Revisits to infants under 1 year				11129
Revisits to children, 1-5 years				2003
Revisits to expectant mothers				1203
Visits to Puerperal Fever Cases				7
Visits to Ophthalmia Cases				35
Death enquiries made				324
Visits to midwives' houses				312
Total visits				21580

4. Assistance Given to Necessitous, Expectant and Nursing Mothers, and to Children under 5 years of age.

No. of Person	S.		Assistance Given.
993	***	***	New Milk.
183			Dried Milk.
4		Ç.,	Nestlés Milk.
28			Malt and Oil and Virol,
8			Food Tickets.
15			Home Helps on 147 days.

5. Amount of Food	DISTE	IBUTED	N. W.		hne	white .	
					Amou		
New Milk					28,563	-	
Dried Milk					1,701	lbs.	
Nestlés Milk					38	tins.	
Malt and Oil					150	lbs.	
Virol					252	lbs.	
Food Tickets					-	Tickets	
6. Method of Feedi	NG.						
o. Habition of Tables			Liv	ving infar visited.	nts I	nfants wh	
r. Breast fed o	nly			2,740		85	
2. Breast fed p	artly			362		56	
3. Artificially f	ed			465		185	
7. OTHER CONDITIONS	5						
The following cond	litions	were fo	und a	mongst	newly	born chi	ldren
visited by the Health V				0			
1. Healthy						3,126	
2. Delicate						305	
3. Premature						136	
8. OTHER INFORMATIO	N.						
Nuisances found	and r	eferred	to M.	O.H.		67	
Cases referred to	N.S.	P.C.C.	.,.			9	
Leaflets distribu	ted					3567	
Houses found to	be cle	an				3336	
Houses found to	be dir	ty				411	
		Strain Commence			and the same of th	- 1000	

## 9. SCHOOL FOR MOTHERS AND INFANT CLINICS.

For thirteen years now the Bolton School for Mothers has conducted centres for Infant welfare, and for the last five years the Public Health Authority has co-operated by supplying their centres with medical officers and such equipment as is required for the

No. of mothers returning to work within three months of birth of child ... ...

153

treatment of minor, but urgent, ailments. The co-operation between the two bodies has been most cordial and successful. The work done by the voluntary helpers of the School for Mothers has been invaluable, and this organisation has also in its service a whole time Nurse. During 1921 she paid 1627 visits and her work is so organised as not to overlap the work of the Health Authority's Visitors. The Public Health Authority values very highly the co-operation of the School for Mothers.

CENTRES OF SCHOOL FOR MOTHERS AND INFANT CLINICS.

		Average Attendance per Session.		
Address	Day	Expectant	Children	
The Friends' School Room, Tipping Street	Monday	2	49	
St. Matthew's Mission Room, James'				
Terrace	Monday	1	24	
Halliwell Road Free Church	Tuesday	3	61	
Victoria Wesleyan School, Grecian				
Crescent	Tuesday	2	3.7	
Girls' Club, Kensington Street	Wednesday	3	75	
*Unity School, Deane Road	Thursday	I	59	
Daubhill Congregational School	Thursday	I	48	
Mawdsley St. Congregational School	Friday	8		

\* On the 19th January, 1922, the Derby Street Council School Infant Clinic was transferred to the Unity School, Deane Road.

The Sessions are held weekly at 3-0 o'clock in the afternoon.

A medical practitioner and a Health Visitor are in attendance at each meeting.

In addition to the above there is a Clinic held weekly at S.S. Peter and Paul's School and one at St. Mary's School. These two are under the control of the Catholic Women's League, and are attended by medical practitioners.

# 10. Bolton Day Nursery

This Institution is now in its fifth year. The management is entirely in the hands of a voluntary organisation and the co-operation of the Bolton Corporation consists of an annual contribution of £300.

During the year April 1st, 1921 to March 31st, 1922, the number of attendances made by children at the Nursery was 5007. Of these attendances, 4509 were of children under three years of age, and 498 of children over three years.

A charge of 1/- per day is made for one child only, for additional children of the same family, 11d. per day and 6d. for Saturdays.

The Nursery has undoubtedly been a very great comfort to many mothers who were not in the happy position of being able to devote all their time to the care of the home.

## Haslam Maternity Home.

The Haslam Maternity Home is very greatly appreciated and is proving a great boon to many Bolton mothers.

The total number of beds available for maternity cases (including labour and isolation beds) is 20.

The fees charged to patients vary from nothing to £4 4s. od. per week. No patient has been refused because of inability to pay a fee.

The only cases not admitted to the Home are:

- 1. Persons suffering from infectious diseases.
- 2. Persons known to be leading an immoral life.
- 3. Persons with no home to go to after confinement, or who are likely to need prolonged hospital treatment after confinement. Such cases are advised to go to Townley's Hospital where they receive every care and attention.

Patients can arrange to be attended by any doctor of their own choosing. If they have made no such arrangement and if medical aid is required, a medical man is immediately summoned from a rota of medical men who have signified their willingness to attend such cases at the fee allowed by the Ministry of Health. If the patient is in a position to pay this fee, the patient is asked to do so; otherwise, the fee is paid by the Local Authority.

# HASLAM MATERNITY HOME, BOLTON.

# STATISTICS, 1921.

I.	Total number of cases admitted					154
2	Average duration of stay in days					17
3.	No. of cases delivered by :-					
	a. Midwives					102
	b. Doctors					48
	Note.—Of those admitted during discharged and the births occ transferred to Manchester for case was delivered in January	urred r Cæsa	at hom	ie, one	case wa	S
4.	Number of cases in which medic	al assi	stance	was so	ught	
	by midwife with reasons for re-	quiring	g assist	ance		36
	a. Antenatal				4	
	Albumen in urine			3		
	Suspected uterine tumour			1		
	b. During Labour	***			9	
	Delayed vertex			6		
	Limb presentation			I		
	. Prolapse of cervix			1		
	Placenta Prævia			I		
	c. After labour				17	
	Ruptured perineum			16		
	Flabby uterus			I		
	d. For infant				6	
	Premature twins			I		
	Feebleness			I		
	Cephalhæmatoma		•••	I		
	Advice on feeding			I		
	Double hare lip and cleft pa	late		1		
	Circumcision	***		I		
5.	No. of cases notified as puerper treatment in each case	ral sep	osis wi	th resu	lt of	Nil

6. No. of cases notified as opht of treatment in each case.		nia neona	torum	with res	ult	Nil
7. No. of cases of "Inflammat		of eves"	howev	er sligh		Nil
8. No. of infants not entirely bettion with reasons why not	breas	st fed wh		he instit		21
Doctors' Cases.			Midwiy	es' Case	es.	
Mothers' milk insufficient	5	No breas	st milk			2
Mothers' anæmic	3	Mothers'	health	indiffer	ent	2
Intestinal trouble of infant	I	Feeblene	ess of in	fants		2
Albuminuria	I	Mothers'	milk p	oor		I
Mastitis	I	Mother a	næmic			I
		Infant ja	undice	d		1
		Facial pa	ralysis	of infan	it	I
						-
11						10
9. No. of Maternal deaths wit						Nil
10. No. of foetal deaths (Stillbo and their causes and the	res					
examinations if obtainable	е	•••				10
a. Stillbirths					7	
Macerated and premat	ure			4		
Breach presentations				2		
Placenta prævia		/		I		
b. Deaths within 10 days					3	
Feebleness				2		
Heart Disease				I		
No post mortem e	xam	inations	were m	ade.		

# Control of Midwives.

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

		Trained.	Untrained.	Total.
No. of Midwives		56	18	74
		2563	600	3163
Av. number of cases per midwife	e	45	33 60	42
No of calls for medical aid . Per cent. of cases in which		269	60	329
medical aid was sought .		10.4%	10.0%	10.4%

Number at the beginning of the year	r				58
Number who ceased to practice in I	Bolton				4
Number who notified their intention	on to pra	actise in	Bolto	n for	
the first time					16
Number practising at the end of the	year				(
The following 344 notifications	were rec	eived fi	rom th	e mid	wives
in accordance with the regulations of	f the Cer	ntral M	idwive	s Boar	d:-
Medical Assistance					329
CONDITIONS FOR WHICH DOCT	ORS WER	E SUM	MONED	IN AN	
Emergency B					
PREGNANCY.					
Deformity or stunted growth				14	
Ante-partum hæmorrhage				6	
Abortion or threatened abortion				6	
Dangerous varicose veins				2	
Alarming Prostration		0		I	
T				-	29
Labour.	111				
Delayed, complicated or obstructe	ed labour		***	94	
Ruptured perineum, &c	•••	***	•••	65	
Malpresentation	***			25	
Retained placenta				17	
Fits or convulsions			/	8	
Placenta prævia		•••		4	
Excessive bleeding				2	
Threatened heart failure	•••	***		2	
Mania				I	
Sores of the genitals	***			I	
Puerperium.				2	19
Rise of temperature or quickening	of pulse			II	
Post-partum hæmorrhage				2	
Abdominal swellings and tenderne				I	
White leg				I	
Collapse				I	
Prolapse of rectum				I	
210/11/201					17

			30					
INFANT.								
Feebleness							20	
Inflammation of	eyes						19	
Malformation							13	
Prematurity							II	
Convulsions			***				1	
							-	64
							-	329
Death of mother	or chi	ld						3
Laying-out of de	ead boo	ły						3
Artificial Feedir	ıg							9
The midwives	' house	s have	e been i	nspect	ed, and	I hav	e exan	nined
the case books,	instrum	ents,	temper	ature	and p	ulse re	cords,	and
appliances of each	midwi	fe four	times	during	the year	ar.		
3163 cases o	ut of	a tota	al 3981	births	s were	attend	ded by	the

midwives.

The Local Authority neither employs nor subsidises any practising midwives.

COST OF MEDICAL AID SENT FOR BY MIDWIVES IN 1921. No. of calls for Medical Aid ... 329 No. of Doctors' Fees paid by Local Supervising Authority 130 Gross amount paid by Local Supervising Authority ... £238. 10. 6 No. of such Fees or part thereof recovered from patients Amount recovered from patients ... ... Net amount paid by Local Supervising Authority for Medical Aid to Mothers and Infants at time of confinement ...

## SECTION IV.

- 1. Animals and Food Inspection.
- 2. Sale of Food and Drugs Acts.
- 3. Public Analyst's Report.

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

I. - GENERAL INSPECTIONS,

Beasts		 		 1086
Calves		 		 409
Sheep		 		 46744
Swine		 		 9983
Store Cattle		 		 660
Slaughter-hou	uses	 		 1409
Railway Sidi	ngs	 	***	 162
Markets and	Fairs	 .1.		 829
Farms		 		 79
Shops		 		 819

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

			Ex	amin	ed.			- Ac	tion Take	n.	
Diseases or Defects	Cows.	Bulls.	Heifers.	Bullocks.	Calves.	Sheep.	Swine.	Whole Carcases Destroyed.	Parts and Organs Destroyed.	Carcases Passed.	Total
m 1 - 1 - 1			-						-		
Tuberculosis		4	25	3	***		I	124	672	***	795
Pneumonia	3	***	***	***	***	***	1	I	3	111	+
Pleurisy	IO	***	2	***	***	***	***	***	12	***	12
Moribund	20	***	***	***	***	4	4	28	***		28
Hepatitis	8	***		***		***	***		8	***	8
Nephritis	5	***		***	***	***	***	***	5	***	5
Mastitis Echinococ-	5	***		***		***			5	***	5
cus Liver	3		***	***	***	***		***	3	***	3
Septicæmia	I					***		1	***		1
Hyperæmia	2		***	***				I	I	***	2
Emaciation	8							8			8
Pericarditis	I		I						2	***	2
Immature					6			6		***	6
Fractures	9	I			***				10		10
Traumatism	7		1	I	2		I	4	7	1	12
Parturition	7								4	3	7
Epilepsy	16		I					I	8	8	17
Abscess	4		I	***	***			1	4		5
Metritis	I					***	***		I	***	I
Congestion			1		Sec. 1				1 - 3		
of Lungs	I						***		I		1
Diarrhœa	2	***	***			***	***		1	1	2
Total	876	5	31	4	8	4	7	175	747	13	935

# 3.-Food Destroyed.

THE REAL PROPERTY.	No.	Tons.	Cwts.	Qrs.	lbs.
Beef	_	5	2	-	2
Mutton	-	_	-	2	4
Pork and Bacon	-	-	4	1	12
Fish	-	2	18	3	-
Rabbits	1313	-	-	-	-
Ox Tongues	-	-	I	3	12
Eggs	1170	_	-	-	-
Fruit	-	1 - 1	2	_	2
Vegetables	_	6	-	-	-
Corned Beef	-	+	9	-	13
Tin Food	-	-	3	2	10
Offal	-	-	6	-	16

# 4.—FARM VISITATION.

Farm Visits		 	79
Cows Examined		 	1436
Abnormal Udders	***	 	14
Milk examined for tube	rcle bacilli	 	9
Tubercle bacilli found		 	3
Tubercle bacilli negativ	е	 	6
Number of Farms not	Dairying	 	II

# 5,-Parasitic Mange.

15 cases of suspected mange have been notified. Of these, 13 were found to be affected, and 2 were found to be free from the disease. 3 of the affected animals were destroyed.

## 6.—Rats & Mice (Destruction) Act, 1919.

Under the above Act frequent visits have been made to premises where these destructive rodents were found; advice and instructions have been given with satisfactory results. Previous to the National Rat Week (31st Oct. to 5th Nov. 1921), 250 circulars were issued to various tradespeople, corn merchants, railway depots, tripe, tallow and oil dealers, and to all farmers in our district, pointing out the urgent necessity for continuous effort in order to exterminate the pest.

# 7.—The American Gooseberry Mildew Order, 1912,

Constant attention to our markets and fruiterers' premises has been paid but no disease in the fruit was detected.

# Sale of Food and Drugs Acts.

ADMINISTRATIVE RETURN OF ACTION TAKEN WITH REGARD TO SAMPLES NOT REPORTED TO BE GENUINE.

Article.		Nature of Adulterat	ion.		Result.
Milk		r-8 % added water			Warning letter sent
Milk		2.7 %			No action taken
Milk		2.7 % ··· ·· 5.9 % ·· ··			Informal sample
Milk		1'3 % deficient in fat			Appeal to cow
Milk	***	1:3 %			No action taken
Milk		5.0 %			Warning letter sent
Milk		5.0 %	***		Warning letter sent
Milk		50%		***	Warning letter sent
Milk		5.0 % ,.			Warning letter sent
Milk		5.0 %			No action taken
Milk		5.3 %			No action taken
Milk		7.7 % ., .,	***		No action taken
Milk		7.7 %			No action taken. Explanation given by vendor
Milk	man	0.7 0/			No action taken
Milk	***	9.7 %	***	***	No action taken
Milk	***	10.0 % " "	***	***	Appeal to cow
Milk	***		***	***	Case dismissed
Milk	***	23.3 %	***	***	Case dismissed
Milk	***	200	0/	***	Case distillased
Mille		5'0 % ,, ,, and 8'8		***	Informal sample
Buttermilk		1'5 % excess of water	***	***	No action taken
Buttermilk		27.76 % added water	***	***	No action taken
Butter		-0 9/	***	***	Warning letter sent
Ham Paste			orio aci	a	warning letter sent
Ham I doic	***	per 1lb of sample			Warning letter sent
	7		***	***	warning letter sent
Potted Mea	t }		***		Warning letter sent
Nut Oil	,	'35 % boron compounds contained 85 0 % o		ad.	
Nut On	***	oil	Jorton se		Informal cample
Lemon Squ	ach		nor nin		Informal sample
Lemon Squ	ida.	contained 3 grains	per pin		No notion taken
		salicylic acid	***	***	No action taken  No action taken.
	1	4 53 % moisture	ino	***	
	114	20.50 % fat and theobrom	me	***	Contents declared on lab
		16.18 % albuminoids	***		el on packets.
Cocoa .	7	10'00 % cane sugar		***	
	1	30'00 % arrowroot	Glano	***	
		14'43 % carbohydrate and		***	
	1	4'36 % mineral matter	***	***	

OFFENCES OTHER THAN ADULTERATION.

Total Fines and Costs ... Nil.

# Annual Report of the Public Analyst and Bacteriologist for the year ended 31st December, 1921.

100									
S	F 8	м	ж	м	ж	- 0.0	200	10	
	w	ю	а	ю	ш	А	$\mathbf{r}$	ж	

Food and Drugs					437
Bacteriological Examina	tions	for the	M.O.H		998
Bacteriological Examina	tions	for the	Vety. S	Surgeon	9
Miscellaneous Analyses					75
Water Analyses					489
Gas Examinations				***	288
					-
					2296

## DETAILS OF FOOD AND DRUGS.

		Total.	Genuine.	Adulterated.	Per cent. Adulterated
Milk		201	180	21	10.4
Butter		49	48	I	2.0
Cheese		4	4		
Margarine		25	25		
Tea		8	8		
Coffee		13	13		
Miscellaneo	us	136	131	. /5	3'7
		100	-		
TOTAL		436	409	27	6.18

## BACTERIOLOGICAL EXAMINATIONS.

### FOR M.O.H.

	Total.	Positive.	Negative.	Doubtful.
Tuberculosis	 837	197	638	2
Diphtheria	 143	27	113	3
Enteric Fever	 18	4	14	

## FOR THE VETERINARY SURGEON.

	Total.	Positive,	Negative.	Doubtful
Milk for Tuberculosis	9	I	8	***

# Public Health (Milk and Cream) Regulations, 1912 and 1917.

(I) MILK AND CREAM—NOT SOLD	AS PRESERVED CREAM.
No of Samples examined for preservative.	Number in which a preservative was reported present.
Milk 202	0
Cream o	0
(2) CREAM SOLD AS PRESERVED (	CREAM.
Correct statements made	0
Incorrect statements made	e o

SECTION V.

Sanitary Work

# Abstract of Sanitary Work.

VISITS MADE,

Houses						16440
Newly-infected houses					***	660
Schools						92
Common-lodging-houses	***		***			830
Houses-let-in-lodgings	***	***	***	***	***	797
Factories		***				451
Workshops						502
Workplaces						292
Bakehouses			***			474
Offensive Trades						152
Dairies, cowsheds, and mi	lk-shops					489
Conversion of closets	***	***			***	468
Drains			***			1088
Miscellaneous					***	1392
ABSTRACT OF WORK DONE	DURING	1921	1.			
Complaints from Public			***	***		363
Complaints from Factory	Inspecto	or				57
Reports to Factory Inspec			taken			37
Nuisances Reported						4049
Letters Written or Verbal	Notices					730
Informal Notices Issued						915
Legal Notices Issued						859
Smoke Observations						498
Smoke Nuisances						27
Smoke Prosecutions						3
Houses Fumigated						801
Articles Disinfected						6175
Articles Destroyed						154
Houses, etc., Limewashed						800
House Repairs			***			1259
Overcrowding Abated			***			
Ashpits or Pails Repaired						394
Privy Ashpits converted in						
Drains Reconstructed or R						223
Yards Repaired or Flagge						542
Samples of Food, etc., Pur						437
Samples Adulterated or other						27
Adulteration Prosecutions						2
ALGUITOTT A TOSOCITIONS	- 100	STORY	1000		130	-

# Housing, 1921.

NUMBER	of New Houses erected during the year :-	
(a)	Total	225
(b)	As part of a municipal housing scheme	191
I.—UNFI	T Dwelling-houses.	
INSP	ECTION.	
(1)	Total number of dwelling-houses inspected for	
	housing defects (under Public Health or	
	Housing Acts)	7207
(2)	Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	1138
(-)		1130
(3)	Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit	
	for human habitation	
6.5		
(4)	Number of dwelling-houses (exclusive of those re- ferred to under the preceding sub-heading) found	
	not to be in all respects reasonably fit for	
	human habitation	1220
2.— Rem	EDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES.	
	Number of defective dwelling-houses rendered fit in	
	consequence of informal action by the Local	
	Authority or their officers	632
III.—	Action under Statutory Powers	
A.	Proceedings under section 28 of the Housing, Town Plan-	
	ning, &c., Act, 1919.	
	(1) Number of dwelling-houses in respect of	
	which notices were served requiring	
	repairs	80

(2)	Number of dwelling-houses which were rendered fit—	
	(a) by owners	80
	(b) by Local Authority in default of owners	
(3)	Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	
B. Proceedin	gs under Public Health Acts.	
(1)	Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	508
(2)	Number of dwelling-houses in which defects were remedied—	
	(a) by owners	484
	(b) by Local Authority in default of owners	-

## Closet Accommodation.

During the year 1921 there were 119 conversions of privy-middens or pails into fresh water closets in the Old Borough and 121 in the Added Area.

From 1899-1921 inclusive, 10,398 closets have been converted at a cost to the Corporation of £20,402, and replaced by water-closets, and 315 privy middens and pails have been demolished. In new houses during the same period, 8632, water-closets have been provided.

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

	Privy	-middens.		Pa	ails.
District.	1898	1921		1898	1921
Old Borough	12740	5409		6782	6256
Added Area	7581	4896		22	27
Extended Borough	20321	10305		6804	6283
In the Old Borough in 1	898 the	numbers	were:		
Privy-middens and	Pails				19522
Water-closets					7587
At present the numbers a	are:				
Privy-middens and	Pails				11665
Water-closets					18023

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, 38·3 per cent. are on the dry system and 61·7 per cent. on the watercarriage system.

80.7

9.04

75.7

38.0

2.19

Water System,

4.09 4.19

Per Cent on Dry System. 39.3 38.3 28'I 28.6 62.0 39.4 38.3 W.W.C. F.W.C. 7082 11541 268 543 599 447 193 485 353 1001 Accommodation, 1921. Present Closet 596 15217 19601 786 506 728 183 213 152 6256 6283 Pail. 12 5409 10305 P.M. 6911 909 418 209 1224 193 364 CLOSET ACCOMMODATION, 1921. F.W.C. Conversions in Old Houses and Additions in New 172 483 131 17 30 12 9 36 W.W.C. Houses, 1921. : Pail. : P.M. \*\*\* W.W.C. F.W.C. 4 No. of Closets Converted or Demolished, : : 13 Pail. 19 : : 19 P.M. 235 19 29 II 00 IO3 48 12 Extended Borough Deane-cum Lostock Darcy Lever-cum-Breightmet Astley Bridge Smithills ... Old Borough Tonge .... Great Lever Heaton Hulton

# 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			I				5
Fellmongers and Tanner	5	***	I		I			***		***		2
Hide and Skin Depots		***	***		***		I	***	***	***	I	2
Gut Scraping		***	***	***	I				***			I
Blood Boiler		***						I		,		I
Tallow Melter							***			***	I	I
Soap Works		I	***		***	***						I
Chemical Works	***						I	1				2
Muriatic Acid Works	****	I	***					***	***		***	I
Tar and Ammoniated Sul	phate											100
Works		I		***	***	***	***	***			***	I
Brick Works		6		I	***					I	***	8
Knackers' Yard		***					***	·I	***		***	1
Total Offensive Trades		10	1	I	5		2	4		I	2	26
Slaughterhouses		9	4	3	20	2	2	2	I	1	5	49
Total		19	5	4	25	2	4	6	I	2	7	75

SECTION VI.

Miscellaneous.

# Queens Park, Bolton

THOS. MIDGLEY, F. R. MET. S.

SUMMARY FOR 1921.

The year 1921 established a good many records for the 35 years:

The year's average reading of the Barometer, 30.063", was '06" above, that of the Dew-point was 44.1° or 5 above. The Shade Maximum, 57.0° was '8° above, the Mean Temperature in the shade, 49.58° was '7° above, the Minimum on the grass was '3° above, and temperatures in the earth at depths from 6" to 48" averaged 16° above any previous records for Bolton, whilst the mean daily movement of the wind, 143 miles, was just equal to the previous lowest record of 1915. Sunshine, 1243'9 hours, was 230 hours above the average, with nine more sunny days than usual. Rainfall was 39.124" or 3.8" below the usual amount. There were 196 rainy days, or five less than usual and the actual time of rainfall was 793'7 hours. The dominant wind direction was south-westerly, with a maximum speed of 44 miles per hour on September 11th.

# Professional Nursing in the Home.

No provision for home nursing is made directly by the Local Authority. The Bolton District Nursing Association provides home nursing for all cases with the exception of measles, scarlet fever, small-pox, and typhus fever. The services of the nurses are given free to all unable to pay; but those unable to incur the expense of a private nurse can obtain the services of the District Nurses on payment of a small fee. Suitable cases have no difficulty in obtaining the services of the District Nurses. The Association is entirely supported by voluntary contributions. During 1921 the number of cases attended by the Association's Nurses was 1,106, the total number of visits being 29,392, an average of 26½ visits per case. The average cost per visit to the Association was 1/3.

## Hospitals Provided by the Local Authority.

- 1. Tuberculosis. There is a pavilion containing 24 beds, 12 for men and 12 for women, in the grounds of the Isolation Hospital.
- 2. Fever. The Borough Isolation Hospital in Hulton Lane has 100 beds for the treatment of Infectious diseases.
- 3. MATERNITY. The Haslam Maternity Home has 20 beds. Full particulars are given in another section.
- 4. SMALL-POX. Under an agreement dated, 19th May, 1915, the Bury and District Joint Hospital Board has agreed to provide hospital accommodation for small-pox patients from Bolton. The small-pox hospital is situated at Heywood, nine miles from Bolton. The Joint Hospital Board provides the ambulance for removing cases from Bolton. In the event of the beds at the Heywood Hospital being full, the Joint Hospital Board has a hospital at Ainsworth, just outside the Bolton borough boundary which will be used for small-pox.

The last case admitted from Bolton to the Heywood Hospital was on the 21st April 1920.

# Hospitals Not Provided by the Local Authority.

BOLTON INFIRMAR	Υ.				Ac	comm	odation.
For Men						61	beds.
For Women		***				49	beds.
For Children		***		***		40	beds.
		Total				150	beds.
EDMUND POTTER	HOSPIT	AL, BOI	TON.				
For Women						20	beds.
For Children						23	beds.
BLAIR CONVALESC	ENT HO	SPITAL,	BROM	LEY CR	coss.		
For Men	***					37	beds.

The Edmund Potter Hospital and the Blair Convalescent Hospital are voluntary organisations administered by the governing body of the Bolton Infirmary.

# Institutional Provision for Unmarried Mothers, Illegitimate Infants and Homeless Children.

EDENS ORPHANAGE, BOLTON. This charitable foundation provides accommodation for 24 homeless boys and 20 girls.

CHADWICK'S ORPHANAGE. This charitable foundation provides accommodation for 23 homeless girls.

THE POOR LAW INSTITUTION at Fishpool, Farnworth, just outside the Bolton borough boundary has ample accommodation for unmarried mothers, illegitimate infants and homeless children. The Poor Law Infirmary (Townleys Hospital) has a ward for paying patients which is evidence that the accommodation for poor law patients is more than sufficient.

## Ambulance Facilities.

- (a). For infectious cases, the Local Authority has a horse ambulance Provision has been made for the purchase of a motor ambulance in the near future.
- (b). For non-infectious cases the Bolton Corporation provides two motor ambulances. These ambulances are used to convey accident cases and cases of sudden illness, etc., to hospital or to their own homes. In cases of illness, persons able to pay are required to pay a fee of 5/-. The motor ambulances were called out 1367 times in 1921 and in 511 cases the fee of 5/- was paid. The Bolton Infirmary has a motor ambulance of its own which is used to convey cases from the Infirmary to the Edmund Potter Hospital, to Blairs Hospital, or to the patient's home. The Poor Law Authority has two motor ambulances which are used for all cases dealt with under the Poor Law.

## Laboratory Work.

All pathological material connected with venereal diseases which was not examined locally by the Medical Officers of the Clinic was sent to the Pathological Laboratory of the Manchester University. Particulars are given in the report on the treatment of venereal diseases.

Other pathological and bacteriological examinations are made by the whole-time Analyst and Bacteriologist of the Local Authority at the Municipal Laboratories. Occasionally, specimens are sent to the Public Health Laboratory, York Place, Manchester.

The following tables show the examinations carried out:-

# Examinations made by the Borough Analyst and Bacteriologist, 1921.

			Total.	Positive.	Negative.	Doubtful
Tuberculosis			837	197	638	2
Diphtheria .			143	27	113	3
Enteric Feve	r		18	4	14	
Milk for T.B.			10	I	9	
Blood for Malaria			2	2		***
Hair for Anthrax			1		I	
Disinfectants	3	***	2	Rideal Walker case.	Coefficient-	5 in each
Mussels			3	B. Coli	Streptococci	
1.		***		10,000	1,000 per	I mollusc.
2.				1,000	1,000	**
3.	***		***	1,000	1,000	"
Total Bacter	iologi	cal E	xamina	tions (other than	Waters)	I.026

Total Bacteriological Examinations (other than Waters) ... 1,02

Examinations made at the Public Health Laboratory, Manchester, 1921.

2	 	***	 Cerebro-spinal Fever.
* 2	 		 Sputum.
1	 		 Typhoid Fever.
1	 		 Milk—Tuberculosis.
18	 		 Milk-Bacterial Content.

<sup>\*</sup>In both these cases malignant disease of the lungs was suspected.

# Antitoxins and Vaccines Supplied to Medical

# Practitioners, 1921.

Diphtheria Antitoxin	 ***	***		4,000 units.
Tetanus Antitoxin Influenza Vaccine	 		3	1,500 units.

# Local Acts, General Adoptive Acts, Bye-Laws and Regulations in Force in Bolton.

### LOCAL ACTS.

Bolton Improvement Act, 1854.

Bolton Improvement Act, 1865.

Bolton Corporation Act, 1872.

Bolton Improvement Act, 1877.

Local Government Board's Provisional Orders Confirmation (Abergavenny Union &c.) Act, 1879.

Bolton Improvement Act, 1882.

Local Government Board's Provisional Orders Confirmation (No. 15) Act, 1893.

Bolton Tramways and Improvement Act, 1897.

Bolton Corporation Act, 1901.

Bolton Corporation Act, 1905.

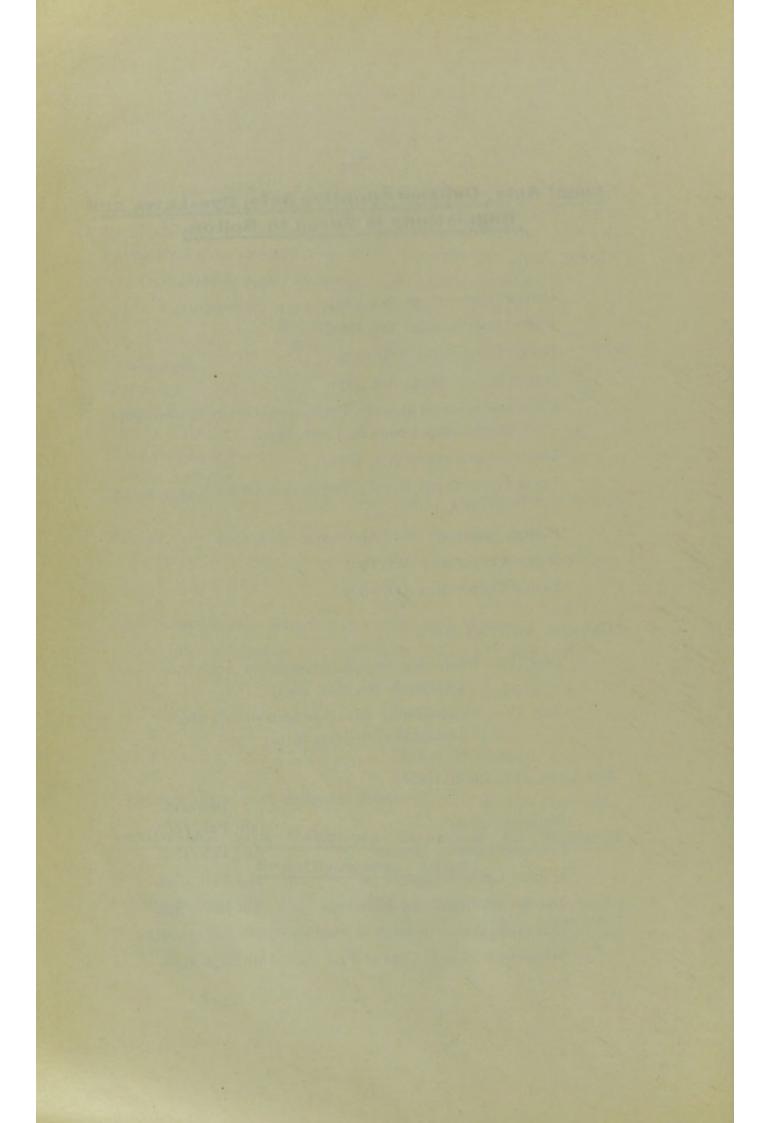
#### GENERAL ADOPTIVE ACTS.

Part III.—Public Health Acts Amendment Act, 1890. (Adopted—6th May, 1891).

Part IV.—Public Health Acts Amendment Act, 1890. (Adopted—6th July, 1910).

#### ByE-LAWS AND REGULATIONS.

			Date Made.
Slaughterhouses			13th Feb. 1867.
Common Lodging House	es		2nd Feb. 1898.
Houses Let in Lodgings			2nd Feb. 1898.
Dairies, Cowsheds and M	Milkshops		5th July, 1899.
Management etc., of Hig	h St. Bath	1S	4th Feb. 1903.
Means of Escape in Case			10th Sept. 1908.



SECTION VII,

Appendix.

		SE	X.											AGE	3.	
Causes of Death.	Total	M.	F.	o to I	I to 2	to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 10 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45
General Diseases.						1			1						1	
Vaccinated		***													***	
Small Pox   Not Vaccinated	300			***				***		***			***		***	
Scarlet Fever	7	1	6				1		4	I			***		***	
Diphtheria & Membranous Croup Typhus		7	14		5	3	3	***	6	2	I		I		***	
Enteric Fever		2	1							1	I					
Relapsing Fever	13/79.5	 I		***	***					***	1			***	п	
Septicæmia (not puerperal)	1000	2	2		***		***			***		***	1			3
Pyæmia (not puerperal)					***		***				***					***
Measles	-	3	2	2	1				2	***			***		**	***
Whooping Cough	- 25	13	12	13	5	2	2	1	2		***					
Chicken Pox	1000					***			***							
Influenza		16	29	4	3				1	I	3	I	I	1	3	6
Asiatic Cholera																***
Malaria	10000		***				***							***		
Rabies Glanders, Farcy	10000							***								
Anthrax Splenic Fever													***		***	
Tetanus			***		***											
Mycoses Pulmonary Tuberculosis	152	77	75		1	T	***		τ	4	17	15	16	10	19	15
Acute Miliary Tuberculosis, Acute Phthisis	9	2	7	I	1		I			1.	I	1	1			2
Tubercular Meningitis .	. 11	8	3	1		2	2		3	. 3		***				
Tabes Mesenterica	7.50	I	I	I	1			***					***			
Other Peritoneal and Intestinal Tubercle	. 12	4	8	3	2	I	I			I	3					1
Tuberculosis of Spinal Column .		I	I								I	I				
	. 5	2	3			***	***	**		***	2		***		***	I
Scrofula															***	
C 1 C L market	. 2		2 2		***	***						***			***	
D' L-L	3 2	I	I						I	***		***				
Syphilis	-	7	2	8					***	***			***	****		***
Purulent Ophthalmia . Other Venereal Diseases .						***	***				***		***	***		
Cancer of the Buccal Cavity .	. 16	15	1				***									***
Stomach, Liver . Peritoneum, Inter		34	31	***	***		***		***	***	***		***	***	***	I
tines and Rectur		13	30			aje.					***	1		1	***	2
., , Female Genital Organs .	. 30		30										I		2	2
. Breast .	. 24		24								•			2		3
,, Skin	2.	1 22	I		···			***					***		***	
Other Tumours		23						***		2	***	***			***	3
Rheumatic Fever,	16		40													
Acute Rheumatism Chronic Rheumatism, Gout,	10	3	13	***	***	***	***	***	2	***	1	I	3	2	3	***
Osteo-arthritis	20	3	5									***		***	***	
Diabetes Exophthalmic Goître		10	10	***						***	2	2		***	3	1
Addison's Disease				***												
Leucocythæmia	200	3 6	8		***		 I				···	···	2	I	I	
Hæmophilia, Hæmorrhagic			-						1							
Diathesis		2	1	***						1	***				***	***
Other General Diseases .		ī	3		***				1		1					
Total General Diseases .	. 608	263	345	34	21	9	11	2	24	17	34	23	26	18	32	40
		-					1				114	1	1000	-	-	

								WARD,																
0	65 to 70	70 to 75	75 to So	80 to 85	85 and upwards	o to 5	5 and upwards	North	East	West	Tonge	Exchange	Bradford	Church	Great	Dar Lever.	Derby	Hulton	Deane-c- Lostock	Rumworth	Halliwell	Heaton	Smithills	Action
						- 3										1							1	1
	***	***													***						***		***	
		***					***	***	***		***	***											***	
		***		***	***	I	6				2		2		I		2							
	***					11	10		2	***	1		3	***	I		5		2	3	2	1		
							3		1	1					***					I		***	***	
	···	***		***		***	2			т.					***	***		···					***	
		***				***	4										2			I	1		***	
	***	***		***	***	***			***	***	***						***			***		***		1
						3	2	***		***				***	***		2		***	***		***	***	
				***	***	23	2		I	4	5		3	***	7		2	I			I		1	
								***				***			***									
2	5	1	2			7	38	3	2	10	2	1	6	1	3	***	3	2	I	2	4	***	2	
										***			***					***	***	***		***		
				***																				
		***						***	***			***					***							
				***		***			***	***	***													
	***	***			***		***	***											***		***			1
3	3	2	I			3	149	8	14	28	6	12	18	8	2		19	1	3	10	9	1	7	H
						3	6			2			4		1		2							
						5	6	1	1	3			3									I	I	
• 5	***			***	***	2			2												***			1
						7	5		2	4	*		2	I		***	1	***		I	I			
							2								1			***				***	1	
	1						5		I	***				1			2	I						1
**	***						3		 I	2		***	***				· · ·							
						I	1	***						1			1							
					***	8	1	1		***	***		2	2		1	2			***				
																								H
5	2	11		2	***		16	2	3	9		***	I	3	6		4	2	2	3	6		1 2	
	8										9	3	5	,		***								
9		7	2	I	***		43	I	2	5	I	1	2	I	4		9	I	1	2	10	***	3	
5	3	4 2	I	1			30	I	2 I	5	1	I	4 2	2	3		4 2	1 2		I	5		3	
6	1 6						2			***			I				***						I	
	1	4	2		1		33		1	8	2	3	7	2	3		***	2	***	***	3	***		
2	I						16			3	I			2			3	2	2		1	1		
I	3	1		1			8		1	I	***			τ	1		t	***		1	2			
I	4	2				I	19	1		I	2		4	I	1		1				3	I	2 2	
			1				4	***	***															1
2						···	4			2 5		 I	 T		···				2	2	2		 I	
							I			1														
1					***		2			1	1								***		***			
					I		4	***		I	2		1	***		***			***		***			
54	52	34	10	5	2	77	531	19	40	103	35	22	72	31	38	1	73	16	13.	27	54	8	28	2

		SE	X.											AGI	E.		
CAUSES OF DEATH.	Total	М.	F.	o to I	I to 2	to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 10 20	20 to 25	25 to 30	30 to 35	35 to 40	to	0
Nervous System and															-		1
Organs of Special Sense.																	1
Meningitis Encephalitis Locomotor Ataxy	24 6 8	13 4 4	11 2 4	4	7	3 1			4 1	2 2					2	1	
Other Diseases of Spinal Cord, Poliomyelitis Apoplexy Cerebral Hæmorrhage	18	8 8 46	6 10 46	2								I		1 		2 2	
Softening of Brain Hemiplegia Paraplegia	2 4 1	2 2 I	2													***	
General Paralysis of Insane Other forms of Mental Alienation Epilepsy Convulsions (non-puerperal; 5	6	3 3	8			***			 I		***			 I	I		
years and over) Infantile Convulsions with Teething (under 5 years)	31	23	8	22	9												1
Neuritis	8	4	4									 I	 I		2	2	
Other Diseases of Nervous System Mastoid Disease Other Diseases of the Ears	2	2							 I							 I	3
Total Diseases of Nervous System, &c	232	128	104	28	16	4		I	8	4		2	2	3	7	9	
		1															
Circulatory System.																	The same
Pericarditis Acute Endocarditis, Acute Myocarditis	22	94	13										 I		 I		
Valvular Disease Fatty Degeneration of Heart Other Organic Disease of Heart Angina Pectoris	14 55 7	56 8 24 6	75 6 31 1							3		5	7	5 2	4 I 	7 2	
Aneurysm Other Diseases of the Arteries Embolism and Thrombosis Diseases of the Veins, Phlebitis	20	57 9 	54 11 1									 I		 I		 1	1 2 2 2 2
Other Diseases of Lymphatic System Hæmorrhage; other Diseases of the Circulatory System		5	2														
Total Diseases of Circulatory System	373	177	196	2		2			1	4		9	8	11	6	11	17

																VAR	D.							
60 to 65	65 to 70	70 to 75	75 to So	80 to 85	85 and upwards	o to 5	5 and upwards	North	East	West	Tonge	Exchange	Bradford	Church	Great	Dar Lever.	Derby	Hulton	Deane-c- Lostock	Rumworth	Halliwell	Heaton	Smithills	Astley
	 I			***		15	9 5 8	: :	2 1	3 2 2	4		2 I I	 I	2 1 1		2		I		6 2	1 1		
1  15  1 3	4 1 23 1 3 	1 6 14   f	3 12 1  1 	2 4		2	14 18 90 2 4 1 2	4	1 3 I 2 1	4 3 8  1  2	1 2 5 I		I T I I I I I I I I I I I I I I I I I I	 7  	1 2 5 I	 1 2  	9 1 3 2	6	1	8	2 3 7 2 1 	4	 4   t	
						31	8	2	9	4			 4  1	 I  	1	 I 	3 1		 I  2		+ ::	 I 		
				***			3				 I		2							 				
22	35	24	22	6	1	49	183	9	20	30	16	1	27	10	15	4	21	7	7	10	29	7	7	1
14 2 8 2 7 6 1 1 1			II I 7 22 2	2 1 21 2 2	9	3 1	1 19 130 14 55 7 3 1111 20 1	I	3 1 2 16 3	 5 23 1 6  10 7 	2 11 2 1  6 1	6 I	2 14 2 8 1 14	6 I 2 4 I	 2 10  7  4 2 1	 I 2 I 2 2  	 1 14 1 10  10 5 	4 3	 1 2 1  	 1 6 1 3 1  5 1	2 12 1 7  2 16 		1 1 7 7 2 2 1 1 2 1	
42	74	57	43	26	11	4	369	15	26	54	24	15	41	1.4	26	9	41	10	5	19	40	5	17	1

		-			_		_		_	_	_					CAU
		SE	X.											AG	E,	
Causes of Death.	Total	М.	F.	o to I	I 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
Respiratory System.							-		1		T	1	1	1		
Laryngitis		2		1	1		***		1			***		***		
Other Diseases of the Larynx Bronchitis	235	III	124	23	5	I				1	1		2	2	3	6
Broncho, Catarrhal and							1									
Lobar and Croupous Pueumonia	90 65	52	38	36	5	3	3	***	3 2	2 I	5		4	4	5	3
Pneumonia	53	30	23	3	2		***	2		1	5	1	2	4	I	2
Pleurisy, Empyema Pulmonary Congestion,	7	3	4		***		***	***	1				I	***	***	2
Pulmonary Apoplexy	3	1	2	I												***
Asthma	3	2	т.		***	***	***		***	***		***	***	***	***	***
Pulmonary Emphysema					***	***	***	***		***	***			***	***	***
Fibroid Disease of Lung	1	I					***			***			***			
Other Diseases of Respiratory System	3	2	I				***			100		I				
			-		-							-		-	-	
Total Diseases of Respiratory System	462	244	218	68	35	5	4	3	6	5	11	2	9	II	9	13
Digestive System.											-					
Diseases of the Mouth and Annexa	6	2	4	5						***		1				
Diseases of the Pharynx, Tonsillitis	9	6	3	1	***		I		4			1	1			
Diseases of the Æsophagus	I	I														
Perforating Ulcer of the Stomach Inflammation of the Stomach,	5	3	2	***	***	***	***	***	***	***	***	***	***	***	***	1
Gastritis, Gastric Catarrh	13	8	5	6	1	111	***	***		***		***		I		***
Other Diseases of the Stomach Epidemic Diarrhœa, Infective	2	I	I	***		***		***			***	***			***	
Enteritis	15	8	7	12	1					***	***					
Diarrhœa (not infective), Gastro- intestinal Catarrh Enteritis (not infective)	10	6	4	5						I	***					
Muco-enteritis	10	2	8	3	***		***								I	
Gastro-enteritis (not infective)	37	20	17	29	12		I	***						***		1
Dyspepsia (under 2 years) Ulceration of Intestines	3	1	2		***		***	***					***	***		***
Duodenal Ulcer	2	I	I					***		***		***		***		I
Appendicitis, Perityphlitis Hernia	19	5	8	***	***	***	***	I	3	4	2	1	***	1	2 I	***
Intestinal Obstruction	9	6	3	5				***		2		***			***	
Other Diseases of Intestines Hydatid of Liver	3	2	1			***	***	***			***	***	***	1		
Cirrhosis of the Liver (not				***	***	***	***	***	***	19.5	***	***	***	***	***	1
alcoholic) Cirrhosis of the Liver (alcoholic)	5	3	2		***		***		***	***		***	***		***	***
Biliary Calculi	6	2	4					***		***		***		222		
Other Diseases of the Liver Peritonitis (not puerperal)	5	1	4 3	1		***	***		***	I	***	***				***
Other Diseases of the Digestive				***	***		***	"	***			***	***	***	***	***
System Total Diseases of the	2	***	2	***	***				***		1			***	1.11	
Digestive System	177	90	87	67	4		2	1	7	8	3	4	1	3	4	4
Genito-urinary System	-															
and Annexa (non-venereal)																
Acute Nephritis	- 12	4	8	1		I			***			1	1	1	1	***
Chronic Bright's Disease Nephritis (unqualified) 10 years	49	27	22	***	***				***		I		1	1	2	3
and over, Uræmia	13	6	7	***					***			***		3	1	3
Other Diseases of the Kidney and Annexa	***								1922		3000	200				
Calculi of the Urinary Passages									***	***		***				***
Carried forward	74	37	37	1		1					1	1	2	5	4	6

																W.	11	ARI	).						
5	60 to 65	to	o t	0 1	to	So to S	upwards	to to	5 and upwards	North	East	West	Tonge	Exchange	Bradford	Church	Creat	C-Br'htmet	Derby	Hulton	Deane-c- Lostock	Rumworth	Halliwell	Heaton	Smithills
5							4	2  31			25	1  32	6		1 23		22	3	26	7	5	6	23	3	8
5	5 4		3	6 5	I	3		64	26 55 46 7	4 7 	12 3 2 	17 13 5 1	7 10	2 3 I 	9 5	3 2 6 1	I	 2 1	12 10 6 2	4 2 2 1		5 + 2	4 8 6 1		5 1 5 
	1							1	3				•••			I	1		1						
0	36				40	23		115	347	28	42	73	23	17	50	26	1 — 29	6	57	16	6	17	43	3	20
								5	7			1			3		1			1			2	***	
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	6	10	-	5	6	-	-		72	-	6		-	3	7	2	3	4	II	4	2	4	13	3	3

		SE	X.											AGE	3.	
Causes of Death.	Total	М.	F.	o to I	to 2	to 3	3 to 4	4 to 5	5 to	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45
Brought forward	74	37	37	1		I					I	1	2	5	4	6
Genito-urinary System												1				
& Annexa (non-venereal) cont																
Diseases of the Bladder Diseases of the Urethra,	4	2	2	**								***		***		
Urinary Abscess Diseases of the Prostate	6	6					***						***		1	
Non-venereal Diseases of Male Genital Organs																
Uterine Hæmorrhage (non- puerperal)																
Uterine Tumour (non-cancerous) Other Diseases of the Uterus	5		5		***						***	***		I		
Ovarian Cyst, Tumour (non-	1	***	1	***	***			***	***		***	***	***		***	***
Other Diseases of Female	1		1		***											
Genital Organs Non-puerperal Diseases of the																
Breast (non-cancerous) Other Diseases of Genito-urinary	1		Í										***			
System Total Diseases of the			1					-:-						1		
Genito-urinary System	95	47	48	1		1					1	I	2	7	5	6
The Puerperal State.																
Abortion, Miscarriage Other Accidents of Pregnancy	-		2					***		***						2
Puerperal Hæmorrhage, Flooding			I					***		***		1			I	***
Other Accidents of Childbirth Puerperal Fever	6		6										1	2	3	
Puerperal Albuminuria and Convulsions	6		6											1	3	1
Total Puerperal	17		17									2	1	3	7	4
Skin & Cellular Tissue.																
Senile Gangrene	3	2	1													
Other Gangrene Carbuncle, Boil			***		***											
Phlegmon, Acute Abscess	***			···	***									***	···	
Ulcer, Bedsore	2		2											***		
Other Diseases of the Skin and Cellular Tissue	1 2		1	1	***		***	***		***		***	•••		***	
Total Diseases of the Skin, &c	10	4	-6	4										***		
Diseases of the Bones																
and Locomotor System.	1	1														
Diseases of the Bones Diseases of the Joints	5	3	2				I		1	2					1	
Other Diseases of Locomotor System,	1	***	1										***	***	***	
Total Diseases of Locomotor System, &c	7	4	3				1		1	2				***	1	
Malformations.								1								
Congenital Hydrocephalus Congenital Malformation of		***						***						***		
the Heart Other Congenital Malformations	8	2 5	6	6	1					1	***					
Total Congenital Malformations		7	11	16	1					1						
	Lynn			2												4

6   10   13   5   6   1     2   72   3   6   6     3   7   2   3   4   11   4   2	Kumwortn 1
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		SE	X.											AG	E.		
CAUSES OF DEATH.	Total	М.	F.	o to I	I to 2	. 2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 10 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	
Diseases of												1			1		1
Early Infancy																	1
Premature Birth Atrophy, Debility, Marasmus	73	38	35	73			**		***					***			
(infantile)	53	33	20	53						***		***		***			1
Want of Breast Milk		I	3	3 4			***							***			
Diseases of Umbilicus	7		6	7													
Injuries at Birth Lack of Care	4 3	4 3		4 3													
Total Diseases of Early Infancy	147	81	66	147													-
Old Age.			3														
Senile Decay, Old Age	- 22	42	61														1
Senile Dementia		5	7		***		***	***	***		***	***	***				-
Total Diseases of Old Age	115	47	68		***	•••	***			***		***	***				-
Violent Causes.																	
1.—Accident. Other Acute Poisonings	1	I															1
Poisoning by Deleterious Gases, Suffocation	I		1	1			***						***				
Conflagration Burns (conflagrations excepted)		6	4	·	2	 I	 I	2	2	**							1
Drowning	7	7				I	***		1	1		1					
Cutting or Piercing Implements	I	1	***			***				***	***	***			1		1:
Falls In Mines and Quarries	120	10	4		***	***	***			1				***	I		1.
Machinery Vehicles	- 3	13	2				***		2	 I		I	***	 I	···	2	1
Animals																	
Otherwise or not stated		2												I		1	1
2Suicide.																	
Poison		3	2													1	
Hanging or Strangulation Drowning		3 4	3			***						 I		1	 I	1	*
Firearms Other Suicides	6	4	2									п				 I	10
3.—Homicide.	3	1	2	Y	2	***					***		***				
4.—Execution.							***								***	•••	
	90				***	***			6			***			***		
Total Violent Deaths	80	59	21	3	4	2	1	2	0	3	***	5	***	3	5	7	
III-defined Causes.																	
Atrophy, Debility, Marasmus (age 1 and under 70) Heart Failure	I	1			ı	***	***			***					***		
(age 1 and under 70) Syncope (age 1 and under 70)	4	1 1	3											1	1		
Teething, Dentition, (without Convulsions)																	370
Dropsy, Ascites, Anasarca Other Ill-defined Causes	I	 I	1			***								***	***		**
Total Ill-defined Deaths		4	4		I			-				•••	***			***	470
The state of the s			*		082		***	***	"		***	***	***			***	

DEATH, 1921.

											Water !					1	VAR	D.						
	60 to 65	65 to 70	70 to 75	75 to So	So to 85	85 and upwards	c to	5 and upwards	North	East	West	Tonge	Exchange	Bradford	Church	Great	Dar Lever.	Derby	Hulton	Deane-c- Lostock	Rumworth	Halliwell	Heaton	Smithills
-																								
4							73		4	7	11	3	3	6	6	10		9	1	I	4	6		1
				***	-		53		6	I.	7	***	3	12 1	1		2	8	2		2	6	I	1
							3 4		***		1								1			1		
							7				3	I		2		1			***			***	***	
							4 3				I			I			***	***		I	I	***	***	 I
							147		10	8	23	4	6	23	8	11	2	18	+	2	7	13	I	3
	2	3	19	25 4	30	23		103	6	3	18	4 2	1 1	9 1	6	6	2	10	5 1	2	I	11 2	5	6
	2	4	22	30	33	24		115	6	3	20	6	2	10	5	6	3	II	6	2	1	13	5	6
	***		***					1		***	***					I					***			
							T						I											
							7	6			2			2		2	1				2	1		
		***	***					Ι				***	***	***							···			
	2	I	I	I		1		14	1	1	1	***		2		2	I	4	I			I		1
								2	2				***	***		***		***	2			2 2		
	6.			***	***		***	15		***			***				***	4					***	***
	***					***	***	2	***	***	***				***	1	***		1					
																					Service of the servic			
	***	2					***	100		***	3							 I						
	 I		 I					3 7									 I	2 I				I	***	
								6	***								т.	···	 I	 I				···
										200												1	1	***
		***	***			***	3			***	***	***	***				***	****		***				
-									-	-					-		***	***		***		8	*	
0	6	5	2	1	***	1	12	68	3	1	12	2	1	5		10	5	14	5	2	5	0	1	2
										1														
		***					1							ī	***		***				***			
		2						4	_						***	 I					1		1	
																		***						
	1							I								***		1						
*		1		-	***			-	***	227	***	1	***	***	***			···	***					
**	1	3		***		1	1	7				1		1	***	1			***					

	I	SE	EX.											AGE		*
CAUSES OF DEATH.	Total	М.	F.	o to I	to 2	to 3	3 to 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
General Diseases	608	263	345	34	21	9	11	2	24	17	34	23	26	18	32	40
Nervous System, &c.	232	128	104	28	16	4		1	8	4		2	2	3	7	-9
Circulatory System	. 373	177	196	2		2		***	I	4		9	8	11	6	TI
Respiratory System	. 462	244	218	68	35	5	4	3	6	5	11	2	9	11	9	13
Digestive System	177	90	87	67	4		2	I	7	8	3	4	1	3	4	4
Genito-urinary System	95	47	48	1		I					1	1	2	7	5	6
The Puerperal State	17		17									2	1	3	7	4
Skin and Cellular Tissu	<b>e</b> 10	4	6	4											1	
Locomotor System, &	7	4	3				I		I	2					I	
Malformations	18	7	II	16	1	***		***		I						
Diseases of Early Infancy	147	81	66	147												
Old Age	115	47	68										4			
Violent Causes	80	59	21	3	4	2	1	2	6	3		5		3	5	7
III-defined Causes	8	4	4		I									1	1	
Grand Total	2349	1155	1194	370	82	23	19	9	53	44	49	48	49	60	78	94

																	VAR	D.					
55 to 50	60 to 65	65 to 70	70 to 75	75 to So	So to 85	85 and upwards	o to 5	5 and upwards	North	East	West	Tonge	Exchange	Bradford	Church	Great	Dar Lever c-Br'htmet	Derby	Hulton	Deane-c- Lostock	Rumworth	Halliwell	Heaton
П																							
57	54	52	34	10	5	2	77	531	19	40	103	35	22	72	31	38	1	73	16	13	27	54	8
19	22	35	24	22	6	I	49	183	9	20	30	16	1	27	10	15	4	21	7	7	10	29	7
29	42	74	57	43	26	11	4	369	15	26	54	24	15	41	14	26	9	41	10	5	19	40	5
30	36	53	50	40	23	5	115	347	28	42	70	23	17	50	26	29	6	57	16	6	17	43	3
12	12	9	11	6	2	1	74	103	9	10	28	10	6	22	I	12	5	32	9	4	8	6	3
		1																					
6	12	16	12	7	1		2	93	4	9	6	***	3	9	2	4	4	13	5	5	7.	15	4
***		***	***	***	***	***	***	17	***		1	2	***	1	***	I		4	***	***	***	1	***
***	I	1	1	***	2	***	4	6	I	1	2	***	***	***	***		1	***	1	2	2		***
1	I	***		***	***	***	1	6	1		2	***				2					1	I	
***		***	***		***		17	1	1	2	***	1		3	1	***	***	3	I	***	2	2	
							147		10	8	23	4	6	23	8	II	2	18	4	2	7	13	I
	2	4	22	30	33	2.4		115	6	3	20	6	2	10	6	6	3	11	6	2	I	13	5
8	6	5	2	1		I	12	68	3	1	12	2	1	5		10	5	14	5	2	5	8	1
	1	3					1	7				I		I		I		I			1		I
								000															
162	189	252	213	159	98	45	503	1846	106	162	351	124	73	264	99	155	40	288	80	48	107	228	38

TABLE II.

POPULATION, BIRTHS AND DEATHS, 1913-1921.

	ated	1	Births.		Total l			erable ths.	Nett	Deaths the Di	belongi strict.	ng to
	estimated f each year	ted r.	Ne	tt.	in	the rict.	d in ict.	s not d in ngh.	Under	ı year Age.	At all	ages
Year.	Population to middle of	Uncorrected Number.	Number.	Rate.	Number.	Rate.	of Non-residents Registered in the District	of Residents no Registered in the Borough.	Number.	Rate per 1000 nett Births.	Number.	Rate.
1	2	3	4	5	6	7	S	9	10	11	12	13
1913	183879	3976	3999	21.7	2564	13.9	39	370	569	142	2895	15
1914	185247	4076	4104	22'1	2416	13.0	60	365	485	118	2721	14
1915	172514	3597	3620	19.5	2390	13.8	44	367	446	123	2713	15
1916	169081	3053	3067	166	2101	12'4	64	380	320	104	2419	14
1917	163411	2692	2710	14.8	2149	13.1	51	379	291	107	2477	15
1918	160619	2736	2749	15.2	2468	15.3	51	387	291	105	2815	17
1919	177462	3032	3052	16'5	2380	13'4	64	336	263	86	2652	1.4
1920	184533	4182	4209	22.8	2277	12.3	74	325	416	98	2528	13
1921	182200	3815	3831	21 0	2038	II.I	81	392	370	96	2349	12

## CENSUS, 1911.

Total Population at all ages	***	***	180851
Total Families or Separate Occupiers			40681
Area of District in acres (land and water)	***		15279

TABLE III.

CAUSES OF, AND AGES AT-DEATH, 1921.

	Nett ]	Nett Deaths at the subjoined or	the subjo	ined Ages of or without		2 .	whether o	whether occurring within	within	Deaths of "Residents"
Cause of Death	səSVIIV	Under 1 year	1 and	s and	2 sud	nuger 25	25 and	nuger 65	bna 20 sbrawqu	and "Non- residents" in Institutions in Bolton.
All causes   Certified	2334	356 14	82	51	96	76	281	trog	191	240
Enteric Fever	n			-	1	1	1 ::	1	-	1
:: ×	: 1	: *	:			:	:			
Scarlet Fever	01	2		I	64 IV			: -		
	22	13	2	101	2010				: :	Ŧ :
Influenza	45	. 4	us m	0 ::	× 6	1 7	11	172	: 00	10
S S Dulmonava Tulsavonlogich	2 2 3		:	: "			н	? : 5	H	1
Tuberculous Meningitis	IOI	1	, ;	7	0 9	34	03	40	0	11
ises	26	4	3	5 4	2 64		: "	. 4	: "	N T
Cancer, Malignant Disease	214		1		23	. 1	17	122	71	25
	10		: 4		2 4	7	00 1	3	I	N
Organic Heart Disease	200	+ +		- 1	3 0	: "	200			7 0
	235	23	5	3	1	-	13	57	132	? :
Other Diseases of Resniratory Organs	208	43	29	6	6.	11	26	46	35	7
Diarrhoga and Enteritis	77	40	4 65		- 1	1 1	~ ~	7	40	+
<b>Pyphlitis</b>	19 61		:	I	1	2	7 67	7	h H	26
Alcoholism	20		:				:	+	I	
nd Bright's Disease	N =	: -		:-	:	: .	: :	0.0		
Puerperal Fever	19		::	-	: :	7 1	17	20	52	1 (
Other accidents and diseases of Preg-										
Congenital Debility and Malforma-	II			:	:	1	OI			3
tion including Fremature Birth	144	142	1	***	-		:			
Violent Deaths, excluding Suicide	200	3	+	10	6	23	00	21	10	45
Other defined Diseases	22	::				2	7	6	4	3
Diseases ill-defined or unlanguage	701	2/	11	7	21	91	49	153	368	76
HWOUNDED OF BUILDINGS	0	:	I				N	01	3	
Totals	2349	370	82	51	46	46	281	109	767	240
Sub-entries Cerebro-spinal Meningitis			:		:	***	-		1	
inclinded touchlyellus										

## TABLE IV.

NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER ONE YEAR OF AGE. INFANT MORTALITY DURING THE YEAR 1921.

Total under	356	-	:	2		? :		-	4	7	9 66	1	23	43	0	41	000	-	1	**	-	91	22	22.5	300	370	
9-12 Months	36	!	:		: 0	:	:		н	2 1			4	13	1	+							***	-	10	36	-
edinoM 6-9	43	:			: "	:	***	-			- 6	? ::	3	17	1	0 -	2			****	::				9	43	
3-6 Months	55 ::	-			: "				Ci		4 (1	1	4	00	2 6	0.00		***	::	****	***	I	I	9	9	54	
squon E-1	79	-	:	1	: "	. :			1			I	1	3	+1+	1,		:	I		:	28	4	1.7	6	79	
Total under 4 Weeks	144			1									20	C4		+ +	22	***		4	7	. I3	67	20	12	158	The state of the s
3-t Meeks	-:			1	: :						: :		61		****			***		***	I		****	2	1	7	_
s-3 Meeks	25				: :						: 24	****			: -	-	1	****	***		***	m	00	7	. 73	25	1
1-2 Weeks	24				::	::	****			:	: "		12	2		2	1			****	I	23	2	7	I	24	shor soon
Under 1 Wee	88		::		: :		****				: 00	****	1		::			****		-	2	4	56	13	00	102	otavad during
	11	:	-	****	: :		:	:	;	:	: :	:	:		:			***			::	****	:	:	:	1	Parato
	::		:		101	:	:	:	:	:	: :		:	:	: :		::		:	***		***			***	::	Nott Rirthe Registered
	::	:	:	:	: :	:	:	:	:		:	****	:	:		:	:	:		:	::	-			:	Totals	Birth
Death	ed	:	:	:	: :	***	:	:		(57		***	:	:	: :		:	:		:		s		arasmus	:	Tc	Nett
Causes of Death	Certified				: :	roup .		ungitus	reulosis	whereulos				orms)							***	rmation	-	M pue			
Ca		:	×	:	Cough	and C	:	T. Lear	rupe	mot 7			T. 11.27	(311 10	: :			***		rth		Malto	Sirth	billity	::		
	All	Small Pox	Chicken Pox	Measies Cardet Forest	Whooping Cough	Diphtheria and Croup	Erysipelas	Abdominal Terbanamical	Other Tuberculous Diseases	Meningitis (not Tuberculous)	Convulsions	Laryngitis	Bronchitis	Diarrhosa	Enteritis	Gastritis	Syphilis	Rickets	Suffocation	Injury at Birth	Atelectasis	Congenital Malformations	Premature Birth	Atrophy, Debility and Marasmus	Other Causes		

TABLE V.

## Public Health (Tuberculosis) Regulations, 1912.

Summary of Notifications during the period from the 2nd January, 1921, to the 31st December, 1921, in the County Borough of Bolton.

	Number of Notifications	rm C.	Sanatoria.	113	92	17		(21)
	Number of 1	on Form	Poor Law Institutions.	30	91	6	9	(20)
		St	Total Notation incation on Form	H	64	10	4	(61)
	Notifications on Form B.	erof Primary N' tifications	Total Primary Votific- ations	H	- 61	10	+	(81)
	TIONS	naryN'	21 01 01	1	61	64	6	(17)
	DIFFICA	rof Prin	01 01 5	+	1	m	74	(91)
I	N	Numbe	Under 5	1	:		:	(15)
		SU	Total N incation nrow no	88	75	37	35	(14)
-			Total Primary Notific- ations,	98	74	36	35	(13)
			bns 66 bnsrdu	64	1	-	:	(12)
	N A	ons.	59 01 55	15	10	64	I	(11)
	FOR	fications,	45 to 55	22	9	1:	н	(21) (11) (01)
	S ON	Noti	St o1 SE	17	17	64	C4	
	NOTIFICATIONS ON FORM A.	Number of Primary Notifi	25 to 35	11	24	24	0	(2) (3) (4) (5) (6) (7) (8) (9)
į	TIFIC.	Prir	So to 25	6	9	24	9	(4)
	Non	oer of	12 to 20	9	6	m	5	(9)
I		Jump	21 01 01	1	8	9	63	(5)
		4	or of &	61	3	6	6	(4)
			1 10 5	1	+	00	4	(3)
			1 01 0	11	н	H	3	(2)
STATE SALES AND ADDRESS OF TAXABLE PARTY. AND ADDRESS OF TAXABLE PARTY.			AGE-PERIODS.	Pulmonary Males	Females	Non-pulmonary Males	Females	Col. (r)

## 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.