



CITY OF BRADFORD.



—❧— REPORT —❧—

ON THE

Health of Bradford

FOR THE YEAR 1896.

BY THE

MEDICAL OFFICER OF HEALTH.



Bradford:

M. FIELD & SONS, GODWIN STREET PRINTING WORKS.





HEALTH DEPARTMENT.

Town Hall,

Bradford,

W. Arnold Evans, M.D. D.P.H.
Medical Officer of Health.

TELEPHONE N^o 506.

Feb 12th

1897

Dear Sir,

I have made arrangements for the ~~the~~
Library the Brit. Med. Association to be
supplied with a copy of my Annual report
every year .

I believe a copy of the report for
the year 1895 has been sent .

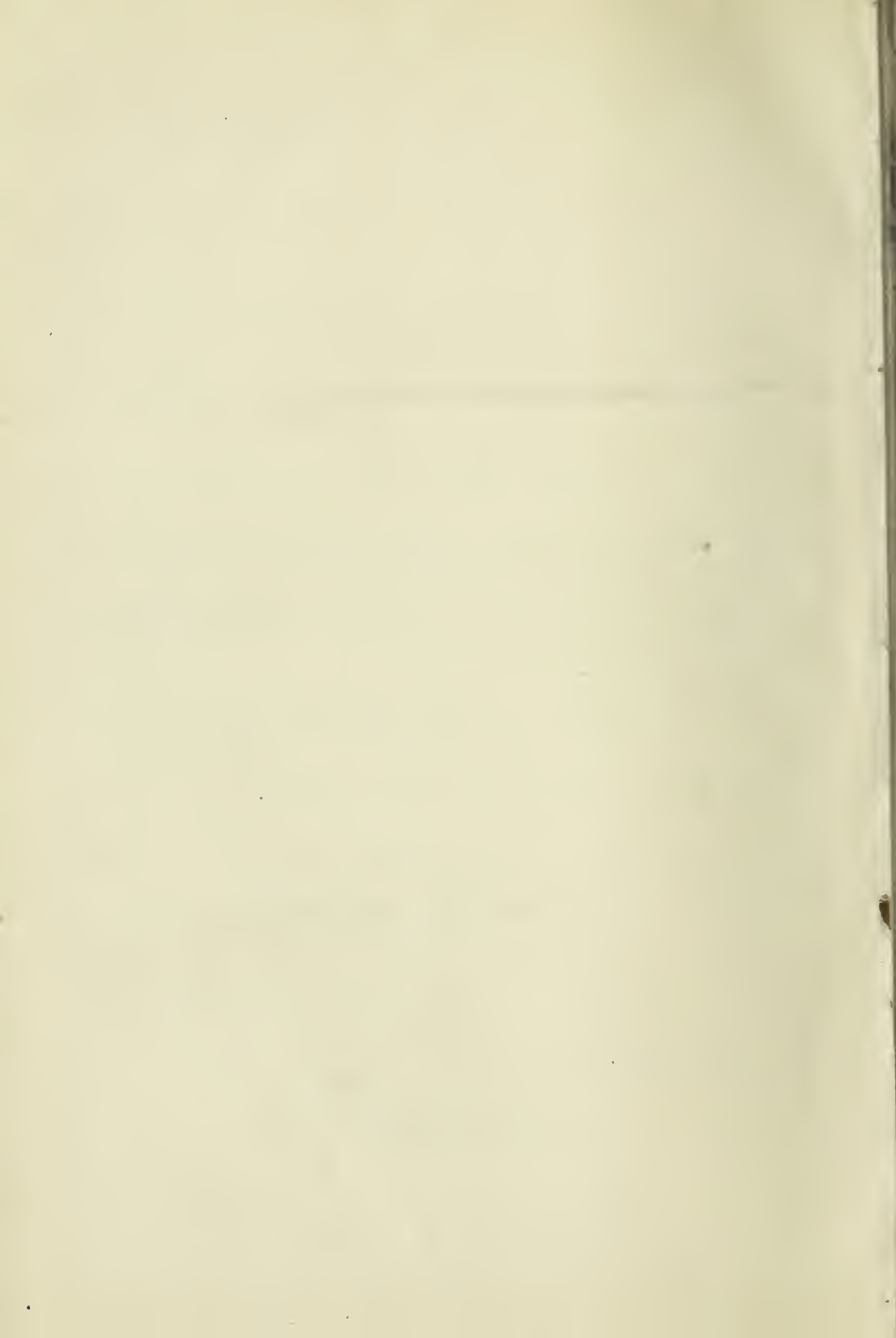
Believe me,

Yours faithfully

W. Arnold Evans

The Librarian

429 Strand



Sanitary Committee, 1896.

(Meets Every Wednesday, at 5 p.m.)

THE WORSHIPFUL THE MAYOR.

MR. COUNCILLOR W. E. BOOTH, Chairman.

MR. COUNCILLOR JAMES FREEMAN, Deputy Chairman.

MR. ALDERMAN JOWETT. MR. ALDERMAN POPPLEWELL.

„ LISTER. „ ROBINSON.

MR. COUNCILLOR ARMITAGE MR. COUNCILLOR MOSER

„ DOBBY „ PILLING

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„ GRAY „ ROBINSON

„ HAYHURST „ SMITH

„ JARRATT „ STANSFIELD

„ JOHNSON „ STOTT

„ LAND „ WILLIAMSON

„ MOORHOUSE „ H. S. WRIGHT

MR. COUNCILLOR JAS. WRIGHT.

City Hospital Committee, 1896.

(Meets Last Tuesday in Each Month.)



MR. COUNCILLOR W. E. BOOTH, Chairman.

MR. COUNCILLOR JAMES FREEMAN, Deputy Chairman.

MR. ALDERMAN JOWETT.

„ „ LISTER.

„ „ POPPLEWELL.

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„ „ ROBINSON.

„ „ SMITH.

„ „ STANSFIELD.

„ „ STOTT.

„ „ JAS. WRIGHT.

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VITAL STATISTICS.

POPULATION.

THE population of the City of Bradford as estimated by the Registrar General to the middle of the year 1896 is 228,809, being an increase of 2,425 over the estimated mean population of the previous year. But in view of the fact that six years have now elapsed since the last official census was taken there must be some uncertainty as to the number of persons living in the City, for it does not necessarily follow that the assumption upon which this estimate is based, viz. that the City is increasing in population at the same rate during the present decade that it did during the ten yearly period 1881-91, holds good. In consequence of the estimate of the Registrar General being liable to inaccuracy in this regard, I attempted verification by taking a census of the number of inhabited houses and assuming that their mean density of population was identical with that ascertained at the 1891 census, viz 4.71 persons per house. On the night of the 12th of April, 1897, Mr. Byng, the Deputy Chief Constable kindly caused the number of empty houses in the City to be taken, the total amounting to only 757 as compared with 1988 on 4th of April, 1891. I have since extracted from the census return of 1891 the number of houses at that time inhabited, and from the books in my office the number of certificates subsequently granted for new houses, and have deducted from this total the houses demolished by street improvements or otherwise closed. It thus appears that on the 12th of April there were 52,500 inhabited houses in the City, and if this figure be multiplied by 4.71 the house density of population in 1891, the population of Bradford would appear to be 247,275 persons, a figure exceeding the estimate of the Registrar General by about 18,000. I am quite aware that on account of the low mortality rates prevailing in Bradford there

are some who consider the population over estimated, but in face of the foregoing consideration I can scarcely see my way to accept that view.

Table I. shows the principal figures as to population and mortality rates for every year since 1882.

TABLE I.—Shewing corrected Population, Birth-rate, and Mortality Rates from 1882-1896.

YEAR.	Corrected Estimate of Population to middle of each year.	ANNUAL RATE PER 100 LIVING.		
		Birth-Rate.	Death-Rate.	Zymotic-Rate.
1882	197,103	31·59	21·01	3·2
1883	199,214	29·88	18·77	1·5
1884	201,347	30·86	21·13	2·6
1885	203,504	30·55	18·62	1·5
1886	205,684	30·55	20·35	2·3
1887	207,887	29·83	21·44	2·9
1888	210,113	29·82	18·66	1·6
1889	212,364	29·53	21·15	2·9
1890	214,634	29·10	23·21	2·3
1891	216,938	28·64	22·12	2·35
1892	219,262	27·18	17·91	1·46
1893	221,610	27·58	20·90	3·22
1894	223,985	26·60	16·95	1·65
1895	226,384	26·03	19·80	2·47
1896	228,809	25·94	16·77	1·50

In Table II. the Ward population is shown. It is seen that the density in the different Wards varies between 3.4 and 90.5 persons per acre.

TABLE II

WARDS.	Population.	Acreage.	Persons per Acre.
North	13,519	372	36.3
South	13,879	308	45.0
East	16,480	392	42.0
West	15,028	166	90.5
Listerhills	19,773	390	61.7
Great Horton	15,623	1283	12.1
Little Horton	16,185	428	37.8
East Bowling	16,988	557	30.4
West Bowling... ..	18,244	1004	18.1
Exchange	5,126	117	43.8
Bradford Moor... ..	18,528	674	27.4
Manningham	23,762	457	51.9
Bolton	8,910	994	8.9
Heaton	17,036	879	19.3
Allerton	9,728	2815	3.4
BOROUGH TOTAL	228,809	10,776	21.0

MARRIAGES.

Returns obtained from Mr. Crowther, Clerk to the Bradford Guardians and from Mr. Helmsley, Clerk to the North Bierley Guardians show that 2,224 marriages were solemnized in the City of Bradford during the year ending Dec. 31st., 1896. The marriage rate was therefore 19·4 per 1000 of the population, an increase upon 1·3 per 1000 upon the rate of the previous year. In London the rate was 18·0 per 1000.

TABLE III.

Periods.	Number of Marriages.	Proportion of Marriages. to Population
1891	2,171	1 in 99
1892	2,059	1 in 106
1893	1,944	1 in 114
1894	2,035	1 in 110
1895	2,053	1 in 110
1896	2,244	1 in 102

BIRTHS.

The number of births registered during the 53 weeks ending January 2nd, 1897, was 5,945 consisting of 2,991 males and 2,954 females, and forming a birth-rate of 25·94 per 1000 of the population. A reference to Table I. shows a gradual but continued decrease in the birth-rate since 1882, and that the rate for the past year is the lowest on record.

TABLE IV.

Shewing Birth-rates in Cities and Towns of England having over 200,000 population during the year ending January 2nd, 1897.

Towns in order of magnitude of Rates.	Birth-rate per 1000.
Liverpool	34·9
Salford	34·9
Sheffield	34·0
Manchester	33·0
Birmingham... ..	32·6
Hull	31·9
Newcastle	31·1
Leeds	30·7
33 Large Towns	30·7
London... ..	30·2
Nottingham	28·9
Bristol	27·6
Bradford	25·94

STILL-BIRTHS.—The present registration laws do not require the registration of still-born children, consequently the bodies of many infants are taken to burial grounds and interred upon the certificate or statement of a midwife or other person present at the birth, no registration of such birth having been made. The Select Committee on Death Certification appointed by Parliament reported some considerable time ago, and recommended the compulsory registration of still-born children, but so far no legislation has been attempted. Information supplied by the registrars of three large Cemeteries in Bradford discloses the fact that during the year ending Dec. 31st., 1896, no less than 297 still-born children were interred without their birth having been registered.

Table V. shews the distribution of the births in the different Wards of the City; the rate ranges from 20·0 per 1,000 in Heaton to 30·3 in South Ward.

TABLE V.
Showing the Births and Birth-rate in the City of Bradford in each of the 15 Wards in 1896.

WARDS.	MALES.			FEMALES.			MALES AND FEMALES.			Birth-rate per 1000.
	Legitimate.		Total.	Legitimate.		Total.	Legitimate.		Total.	
	Illegitimate.	Illegitimate.	Illegitimate.	Illegitimate.	Illegitimate.	Illegitimate.	Illegitimate.	Illegitimate.		
North	158	20	178	162	22	184	320	42	362	26.7
South	183	15	198	213	11	224	396	26	422	30.3
East... ..	201	7	208	202	8	210	403	15	468	25.3
West	153	15	168	178	13	191	331	28	359	23.8
Listerhills ...	201	14	215	191	12	203	392	26	418	21.1
Great Horton...	209	6	215	188	1	189	397	7	404	25.2
Little Horton...	171	32	203	227	31	258	398	63	461	28.4
East Bowling...	223	8	231	231	11	242	454	19	473	27.8
West Bowling..	268	12	280	260	8	268	528	20	548	30.0
Exchange ..	58	5	63	40	10	50	93	15	113	22.0
Bradford Moor.	270	7	277	241	14	235	511	21	532	28.7
Manningham ...	308	12	320	267	10	277	575	22	597	25.1
Bolton	116	5	121	82	2	84	198	7	205	23.0
Heaton	190	7	197	171	7	178	361	14	375	20.0
Allerton	116	1	117	139	2	141	255	3	258	26.5
BOROUGH TOTAL	2825	166	2991	2792	162	2954	5617	328	5945	25.04

Table VI. sets forth the births in each quarter of the year.

TABLE VI.

Shewing number of Births and Birth-rates in each quarter of 1896.

1896.	Males.	Females.	Total.	Birth-rate per 1000 living.
1st Quarter ..	705	754	1459	25·6
2nd ,, ...	752	712	1464	25·7
3rd ,, ...	774	789	1563	25·4
4th ,, ...	760	699	1459	25·5

From Table VII. it is seen that 328 of the total number of births were those of illegitimate children, or 5·5 per cent. of the whole.

TABLE VII.

Shewing the Illegitimate Births and Birth-rate in Bradford during each of the five years 1891-1896 inclusive.

Year.	Illegitimate Births.	Per cent. of Total Births.
1891	362	5·8
1892	329	5·5
1893	320	5·2
1894	331	5·5
1895	345	5·8
1896	328	5·5

DEATHS.

The number of deaths from all causes registered during the 53 weeks ending January 2nd, 1897, was 3838, of which 1939 were of males and 1899 of females. The death-rate for the year is 16·7 per 1000, the lowest rate that has yet been recorded. In England and Wales the death-rate was 17·1 per 1000, and in the thirty-three large Towns 18·9 per 1000; in London it was 18·5 per 1000.

The table following gives the number of births and deaths and rates per 1000 since the year 1881.

TABLE VIII.

YEAR.	Estimated Population in the middle of each year.	Births.	Deaths.	Annual rate per 1000 living.	
				Births.	Deaths.
1882	197,103	6225	4142	31·59	21·01
† 1883	199,214	5953	3741	29·88	18·77
1884	201,347	6216	4255	30·86	21·13
1885	203,604	6218	3791	30·65	18·62
1886	205,684	6285	4187	30·55	20·35
1887	207,887	6202	4458	29·83	21·44
1888	210,113	6266	3922	29·82	18·66
1889	212,364	6272	4492	29·53	21·15
† 1890	214,634	6247	4982	29·10	23·21
1891	216,938	6214	4800	28·64	22·12
1892	219,262	5959	3927	27·18	17·91
1893	221,610	6112	4632	27·58	20·90
1894	223,985	5960	3797	26·60	16·95
1895	226,384	5894	4483	26·03	19·80
† 1896	228,809	5945	3838	25·94	16·77

† In these years the births and deaths are those registered in 53 weeks.

A death-rate of 16·7 per 1000 is a very low one for a manufacturing City like Bradford, and is as much as 3·1 per 1000 less than the death-rate for 1895. In looking over the Causes of Death during the year with a view of discovering the cause of the decreased mortality, I find that the chief differences from the mortality in the previous year are as follows:—

TABLE IX.

DISEASES.	Deaths in 1895.	Deaths in 1896.	Decrease.
Diarrhoea	361	70	291
Bronchitis	525	382	143
Convulsions	248	152	96
Influenza... ..	114	19	95
Atrophy and Debility	186	145	41
Old Age	224	184	40
Tuberculous Diseases, including Phthisis	446	416	30
Pneumonia	327	304	23
Brain Disease... ..	308	286	22
Premature Birth	125	107	18
Typhoid Fever	39	29	10

Bronchitis was much less common than is usual, and there were also 23 fewer deaths from Pneumonia than in the previous year; the prevalence of these diseases is to a large extent dependent upon cold wet weather, and their decreased prevalence during the past year indicates that the climatic conditions were unfavourable to their existence. The comparatively small number of deaths from Diarrhoea, viz. 70, as compared with 361 for 1895, is due to the fact that the hot weather during the summer months was not of long duration, and consequently the heat necessary for the cultivation of the diarrhoeal poisons in polluted soil was not present. It is satisfactory to note the

greatly diminished mortality from Influenza. On the other hand the number of lives sacrificed to Tuberculous diseases has not undergone much diminution, Phthisis contributing 367 deaths as compared with 366 for the previous year. The mortality from Measles increased from 17 deaths in 1895 to 105 in 1896, and Whooping Cough from 98 to 105.

TABLE X.

Comparative Table shewing the Estimated Population, Birth-rate, Death-rate, and Infantile Death-rate in each of the Twelve largest towns of England and Wales (those having a population of over 200,000) for the year 1896.

	Estimated Population to middle of 1896.	Birth-rate.	Death-rate.	Zymotic rate.	Deaths of Infants to 1000 Births.	Persons to an Acre.
London ...	4,421,955	30·2	18·6	3·14	161	59·2
Manchester..	529,561	33·0	22·6	3·42	176	41·0
Liverpool ..	632,572	34·9	22·7	3·01	173	47·8
Birmingham	501,241	32·6	20·8	3·57	197	39·5
Leeds	402,449	30·7	18·8	2·28	169	18·7
Sheffield ...	347,278	34·0	19·3	2·91	173	17·7
Bristol... ..	230,623	27·6	16·9	1·90	142	49·3
Nottingham	229,775	28·9	17·5	2·47	168	21·0
Bradford	223,809	25·94	16·77	1·50	143	21·2
Hull	220,844	31·9	18·9	3·32	173	26·8
Newcastle ...	212,223	31·1	18·5	2·08	165	39·5
Salford ...	210,707	34·9	22·6	4·10	199	40·7

Mortality in the Wards.

In Table XI. is given the Mortality in the Wards. It is seen to vary from 11·8 per 1000 in Bolton and Heaton to 19·9 and 20·7 in East Bowling and North Wards respectively.

TABLE XI.

Shewing the mortality rates in the various Wards.

WARDS.	Total death-rate per 1000 living.
North	20·7
South	19·6
East	16·5
West	18·1
Listerhills	14·3
Great Horton	17·2
Little Horton	18·3
East Bowling	19·9
West Bowling	18·0
Exchange	19·8
Bradford Moor	16·6
Manningham	16·3
Bolton	11·8
Heaton	11·8
Allerton	14·1
BOROUGH TOTAL	16·77

The Seasonal mortality is seen in Table XII.

TABLE XII.

	Zymotic Diseases.	Consumption.	Lung Diseases excluding Consumption.	From all causes.
First Quarter ...	1·4	1·8	3·4	16·9
Second Quarter...	1·0	1·6	3·0	16·1
Third Quarter ...	1·6	1·4	1·9	15·5
Fourth Quarter...	1·7	1·4	3·8	17·4
Whole Year	1·50	1·5	3·80	16·77

Ages at Death.

INFANTILE MORTALITY.--The total number of deaths of infants under twelve months of age was 849, equivalent to a yearly death-rate of 142 per 1000 births. The infantile mortality rates varied in the thirty-three great towns from 135 per 1000 births in Brighton to 203 in Preston.

The table appended shews the principal causes of the infant mortality.

TABLE XIII.

Rates of Mortality of Children under 1 year of age, from Chief Infantile Diseases per 1000 Births.

	1894.		1895.		1896.	
	Deaths	Rate per 1000 Births.	Deaths.	Rate per 1000 Births.	Deaths.	Rate per 1000 Births.
From all Causes	860	144	1197	203	849	142
Lung Diseases...	188	32	186	31	159	26
Convulsions ...	128	21	197	33	121	20
Atrophy and Debility... ..	139	23	166	28	125	21
Premature Birth.	122	20	125	21	106	17
Diarrhœa	33	5	246	42	50	8
Whooping Cough	23	4	42	7	49	8
Tuberculous Disease	23	4	31	5	39	6
Measles	31	5	3	0.5	23	3

The infantile mortality varied, as shewn in Table XIV., from 82 per 1000 births in Bolton Ward, to 189 and 190 per 1000 in the West and North Wards respectively.

TABLE XIV.

Shewing number of Deaths of Infants under 1 year of age and the Death-rate per 1000 Births in each Ward.

WARDS.	Deaths of Infants under 1 year of age.	Death-rate per 1000 Births.
North	69	190
South	69	163
East	56	134
West	68	189
Listerhills	50	119
Great Horton	41	101
Little Horton	76	164
East Bowling	75	158
West Bowling	62	113
Exchange	20	177
Bradford Moor	84	157
Manningham	97	162
Bolton	17	82
Heaton	41	109
Allerton	24	92
BOROUGH TOTAL	849	143

TABLE XV.

*Seasonal and Infantile Mortality.**

WARDS.	QUARTERS.				Total Deaths.	Deaths under 5 years of age.	Percent- age of Deaths under 5 years to total deaths.	Percent- age of Deaths under 1 year to total births.
	Mar.	June.	Sept. 14 weeks	Dec.				
North	62	62	62	59	245	103	42·0	19·0
South	78	50	65	45	238	89	37·3	16·3
East	70	46	54	69	239	86	35·9	13·3
West	55	51	57	56	239	72	30·1	15·3
Listerhills	59	56	55	78	248	69	27·8	11·9
Great Horton ...	56	53	51	76	236	78	33·0	10·1
Little Horton ...	57	74	63	66	260	102	39·2	13·6
East Bowling ...	79	71	71	75	296	120	40·5	15·8
West Bowling ...	70	74	67	77	288	105	36·4	11·3
Exchange	19	27	19	24	89	26	29·2	17·6
Bradford Moor ...	78	61	74	56	269	127	47·2	15·7
Manningham ...	89	78	101	71	339	128	37·7	16·2
Bolton... ..	26	22	25	19	92	29	31·5	8·2
Heaton	41	46	44	46	177	44	24·8	8·2
Allerton	24	25	28	44	121	42	34·7	9·3
Public Institutions	104	123	119	136	482	81	16·8	...
BOROUGH TOTAL	967	919	955	997	3838	1301	33·8	14·2

* In this table the deaths occurring in the Public Institutions have been deducted from the Wards in which the Institutions are situate and classified together.

TABLE XVI.

Shewing the proportion of Deaths of Children under 1 year and under 5 in the City of Bradford, during the 20 years 1877-96.

YEARS.	Deaths under 1 year per 1000 Births.	Deaths under 1 year per 100 Deaths at all ages.	Death-rate under 5 years per 1000 living at that age.	Death-rate under 5 years per 100 deaths at all ages.
1877	157	27.1	78.6	44.3
1878	178	25.9	85.7	47.4
1879	152	23.5	74.3	42.4
1880	176	27.2	82.2	48.0
1881	154	25.8	56.4	40.7
1882	174	27.0	71.4	45.9
1883	147	23.4	50.5	36.8
1884	181	34.2	62.1	41.2
1885	144	23.6	49.9	37.7
1886	168	25.1	59.4	41.5
1887	179	24.9	62.0	41.6
1888	153	24.6	50.0	39.0
1889	181	25.3	60.8	42.6
1890	169	21.2	55.8	35.9
1891	181	23.4	57.2	39.0
1892	155	23.5	44.8	37.4
1893	198	26.1	79.5	39.7
1894	144	22.6	59.2	36.1
1895	203	26.6	75.9	39.2
1896	143	22.1	56.2	38.8

Deaths in Public Institutions.

The number of deaths occurring in the Public Institutions of the City, amounted to 482, and were distributed as follows:—

	Males.	Females.	Total.
Eye and Ear Hospital	1	—	1
St. Catherine's Home	—	14	14
Children's Hospital	12	10	22
City Hospital for Infectious Diseases	19	18	37
Infirmary	97	75	172
Workhouse	129	107	236
	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>
	258	224	482
	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>

Infectious Diseases.

The Deaths due to the seven principal Zymotic Diseases—Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever and Diarrhœa - numbered 344, equivalent to a Death-rate of 1.5 per 1000. Table XVII. gives the figures for the past 10 years.

TABLE XVII.

Shewing number of Deaths from Zymotic Diseases in Bradford during the years 1887-1896.

DISEASES.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	Total in 10 years for each Disease.
Small-pox ... ..	...	2	1	...	...	4	113	27	...	1	148
Measles	124	120	113	208	81	62	68	111	17	105	1009
Scarlet Fever... ..	98	33	63	46	143	45	71	72	25	24	620
Diphtheria	13	7	12	8	13	10	19	13	18	12	125
Whooping Cough... ..	150	38	178	50	133	90	97	63	98	105	902
Typhus Fever ... ..	...	...	1	...	2	...	...	...	...	...	3
Typhoid Fever	32	19	48	31	27	18	48	31	39	28	321
Other or doubtful Fevers	1	7	4	3	5	1	5	1	3	...	30
Diarrhoea	202	131	205	154	106	91	292	53	361	69	1664
Total Zymotic Diseases } each year	620	357	625	500	510	321	713	371	561	344	4922

The prevalence of Infectious Disease in Bradford as compared with England and Wales and the thirty-three great towns is shewn in the following table.

TABLE XVIII.

1896.	No. of Deaths.	Death-rates per 1000 living.		
		Bradford.	England and Wales.	33 Large Towns.
Small-pox	1	0.00	0.02	0.00
Measles	105	0.45	0.56	0.71
Scarlatina	24	0.10	0.18	0.22
Diphtheria and Croup	19	0.09	0.29	0.38
Whooping Cough ...	105	0.45	0.41	0.57
“Fever”	28	0.12	0.17	0.19
Diarrhœa	69	0.38	0.55	0.79
7 Zymotic Diseases ...	350	1.50	2.18	2.86

The number of deaths from each infectious disease is given in the following tables:—

TABLE XIX.

Deaths from Measles.

WABDS.	QUARTERS.								Year 1896.		
	March.		June.		Sept.		Dec.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
North	I	...	...	...	...	...	2	4	3	4	7
South	I	I	I	I	2	3
East	5	5	5	5	10
West	I	...	I	...	...	...	2	...	2
Listerhills	8	5	8	5	13
Great Horton	2	...	10	3	12	3	15
Little Horton	3	...	5	5	8	5	13
East Bowling	I	I	3	2	4	3	7
West Bowling	I	4	4	4	5	9
Exchange	I	I	I	I	2
Bradford Moor	I	I	...	...	...	I	2	2	3	5
Manningham	4	I	I	I	5	2	7
Bolton	I	...	...	I	...	I	I	2
Heaton	I	I	I	I	2
Allerton	3	5	3	5	8
BOROUGH TOTAL	I	I	2	I	II	4	46	39	60	45	105

Ages at Death.

Under I Year	I—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
23	43	22	7	4	5	...	I	...	...	...	...	105

TABLE XXI.
Deaths from Diphtheria.*

WARDS.	QUARTERS.								Year, 1896.		
	March.		June.		Sept., 14 weeks.		Dec.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
North... ..	...	...	...	...	...	...	...	...	...	...	...
South... ..	1	1	...	...	...	...	...	...	1	1	2
East ... ..	...	...	...	...	..	...	...	...	...	...	...
West ... ..	...	...	...	...	...	...	...	...	...	...	...
Listerhills ... ..	...	...	...	...	...	...	...	...	...	...	...
Great Horton ...	2	...	1	...	...	...	...	...	3	...	3
Little Horton ...	...	1	...	..	...	...	...	...	...	1	1
East Bowling ...	2	...	...	...	1	...	...	...	3	...	3
West Bowling ...	...	...	...	...	...	...	...	...	...	...	...
Exchange ... ..	...	...	...	...	...	...	...	...	...	...	...
Bradford Moor...	...	...	...	...	...	...	...	...	..	...	...
Manningham ...	...	...	...	1	...	...	1	...	1	1	2
Bolton ... ..	...	...	...	...	...	...	...	...	...	...	...
Heaton ... ..	...	...	...	...	...	...	...	...	...	...	...
Allerton ... ..	...	...	...	...	...	1	...	...	...	1	1
BOROUGH TOTAL	5	2	1	1	1	1	1	...	8	4	12

Ages at Death.

Under 1 Year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
1	...	2	...	3	3	1	...	1	1	..	...	12

* Deaths in Public Institutions are referred to in the Wards from whence the patients came.

TABLE XXII.

*Deaths from Scarlet Fever.**

WARDS.	QUARTERS.								Year, 1876.		
	March.		June.		Sept., 14 weeks.		Dec.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
North... ..	...	...	...	...	...	...	...	...	...	...	...
South .. .. .	...	...	...	...	...	...	...	...	...	...	...
East	1	...	...	...	...	1	...	...	1	1	2
West ... .. .	...	...	...	...	...	...	...	...	...	...	...
Listerhills ...	...	...	...	...	...	...	...	...	...	...	...
Great Horton ..	...	...	...	...	...	...	...	1	...	1	1
Little Horton ...	1	...	...	...	...	...	...	...	1	...	1
East Bowling ..	...	1	...	...	1	2	1	...	2	3	5
West Bowling ...	...	...	1	...	...	1	...	...	1	1	2
Exchange ... ..	...	...	...	...	...	...	...	...	...	...	...
Bradford Moor...	...	...	...	...	1	2	...	...	1	2	3
Manningham ...	1	...	...	...	1	1	...	3	2	4	6
Bolton ... .. .	...	1	...	...	...	1	1	...	1	2	3
Heaton ... .. .	...	...	...	1	...	...	...	...	...	1	1
Allerton ... ..	...	...	...	...	...	...	...	...	...	...	...
BOROUGH TOTAL	3	2	1	1	3	8	2	4	9	15	24

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
1	5	1	4	4	7	1	1	...	...	...	...	24

* Deaths in Public Institutions are referred to in the Wards from whence the patients came.

TABLE XXIII.

Deaths from Diarrhœa.

WARDS.	QUARTERS.								Year 1896.		
	March.		June.		Sept., 14 weeks.		Dec.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
North .. ...	...	...	1	...	1	3	1	...	3	3	6
South... ..	...	...	1	...	...	2	...	...	1	2	3
East ... ..	...	...	...	1	...	1	...	...	...	2	2
West	1	...	...	...	1	...	1	...	3	...	3
Listerhills ...	...	...	...	...	2	2	1	...	3	2	5
Great Horton ...	...	...	...	...	1	1	...	...	1	1	2
Little Horton ...	...	...	...	1	2	1	...	...	2	2	4
East Bowling ...	...	...	3	..	5	5	2	...	10	5	15
West Bowling ..	...	...	...	...	2	2	...	...	2	2	4
Exchange	1	...	...	...	2	...	...	...	3	...	3
Bradford Moor...	...	...	1	...	7	2	1	...	9	2	11
Manningham ...	...	1	1	1	3	4	...	...	4	6	10
Bolton ... ..	...	...	..	...	...	..	...	...	...	...	...
Heaton	1	...	...	...	1	...	...	...	2	...	2
Allerton ... ..	...	...	..	...	...	...	...	...	...	...	...
BOROUGH TOTAL	3	1	7	3	27	23	7	..	43	27	70

Ages at Death.

Under 1 Year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
50	5	2	...	1	...	...	1	1	...	3	7	70

* Deaths in Public Institutions are referred to in the Wards from whence the patients come.

TABLE XXIV.

*Deaths from other Zymotic Diseases.**

WARDS.	Influenza.		Erysipelas.		Syphilis.		Rheumatic Fever.		Puerperal Fever.		1866. Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
North... ..	...	...	...	..	1	3	2	...	...	...	6
South... ..	2	...	...	...	1	2	...	...	...	1	6
East	2	2	...	...	...	...	1	1	...	...	6
West	1	...	2	...	1	2	1	4	...	...	11
Listerhills	2	1	2	...	...	1	1	...	...	..	7
Great Horton	2	...	1	...	...	...	1	3	...	...	7
Little Horton ... ..	...	...	2	1	1	1	3	...	...	1	9
East Bowling	1	...	...	...	5	...	2	2	...	1	11
West Bowling ... ..	...	...	...	...	2	...	2	2	..	1	7
Exchange ... ..	...	...	1	...	1	3	..	1	...	...	6
Bradford Moor	1	1	...	1	1	...	...	...	...	...	4
Manningham ... ..	...	1	...	...	1	...	1	2	...	...	5
Bolton ... ..	...	1	...	...	...	...	...	2	...	1	4
Heaton	1	1	...	...	...	...	1	...	...	...	3
Allerton ... ..	...	...	...	.	...	...	...	1	...	...	1
BOROUGH TOTAL	12	7	8	2	14	12	15	18	...	5	93

* Deaths in Public Institutions are referred to in the Wards from whence they come.

TYPHOID FEVER.—There were notified during the year 152 cases of this disease, 29 of which terminated fatally. An analysis of these cases is seen in Tables XXV. and XXVI.

TABLE XXV.

Shewing number of cases, deaths and case-mortality from Typhoid Fever during the year 1896.

AGE.	CASES.		DEATHS.		Death-rate per cent.
	Males.	Females.	Males.	Females.	
Under 5	3	3	...	1	16·7
5—10	13	11	2	1	12·5
10—20	27	20	4	3	14·8
20—30	27	12	7	2	23·0
30—40	16	4	5	.	25
40—50	6	3	1	...	11·1
50 and upwards	4	3	2	1	42·8
ALL AGES...	96	56	21	8	19·0

TABLE XXVI.

Shewing number of deaths and percentage mortality from Typhoid Fever during each of the last 10 years.

YEARS.	No. of Deaths.	Deaths per 100 cases notified.
1887	32	20·9
1888	19	18·1
1889	48	28·7
1890	31	21·5
1891	27	17·2
1892	18	22·5
1893	48	22·3
1894	31	22·0
1895	39	22·0
1896	29	19·0

Every house in which a case of Typhoid Fever occurred was made the subject of special inspection and any sanitary errors discovered were remedied.

TABLE XXVII.

Notification of Typhoid Fever in different Streets, 1896.

NORTH WARD.

- | | |
|--------------------|-----------------------|
| 1, Bolton Road. | 1, Valley Road. |
| 1, Captain Street. | 1, Wapping Road. |
| 2, Stanacre Place. | 1, Wellington Street. |
| 1, Sun Street. | |

SOUTH WARD.

- | | |
|--------------------|---------------------|
| 1, Acorn Street. | 1, Thryberg Street. |
| 1, Mount Street. | 1, Florence Street. |
| 1, Cabinet Street. | |

EAST WARD.

- | | |
|-----------------------|-----------------------|
| 1, Exeter Street. | 1, Valley View Grove. |
| 1, Sunnybank Terrace. | 1, Ripon Street. |
| 1, Barkerend Road. | 1, Wilfred Street. |

WEST WARD.

- | | |
|------------------------|---------------------|
| 4, Infirmary. | 1, King Street. |
| 1, Gracechurch Street. | 1, Thornton Street. |
| 2, Thornton Road. | 1, Longcroft Place. |
| 1, Hanover Square. | 1, Sedgwick Street. |

LISTERHILLS WARD.

- | | |
|---------------------|------------------------|
| 2, Abram Gate. | 1, Jonas Gate. |
| 5, Bower Street. | 1, Listerhills Road. |
| 1, Chester Street. | 1, Thornton Street. |
| 1, Earl Street. | 2, Fitzgerald Street. |
| 3, Sterling Street. | 1, Little Horton Lane. |
| 1, Woodhead Road. | 1, Manchester Road. |
| 1, Grafton Street. | 1, Portland Street. |
| 1, Grantham Road. | 1, William Street. |

GREAT HORTON WARD.

- | | |
|------------------------|---------------------|
| 1, Beldon Road. | 1, Holly Bank Road. |
| 1, Harris Court. | 1, Southfield Lane. |
| 1, Princeville Street. | 1, Derby Street. |
| 1, Cragg Street. | 1, Lawrence Street. |

LITTLE HORTON WARD.

- | | |
|----------------------|-------------------------|
| 3, Belloe Street. | 1, Herbert Street. |
| 1, Giles Street. | 1, Jesse Street. |
| 1, Ida Street. | 1, College Road. |
| 1, Mitchell Street. | 1, Holme Top Street. |
| 1, Cleveland Street. | 1, Little Horton Green. |

EAST BOWLING WARD

- | | |
|----------------------|--------------------|
| 1, Bolling Street. | 2, Lower Lane. |
| 2, Hall Lane. | 1, Pollard Street. |
| 3, Mill Lane. | 1, Frances Street. |
| 1, Caledonia Street. | 1, Marsden Fold. |

WEST BOWLING WARD.

- | | |
|---------------------|----------------------|
| 1, Baird Street. | 1, Round Street. |
| 1, Evens Terrace. | 2, Bowling Old Lane. |
| 3, Parsonage Road. | 2, Manchester Road. |
| 1, Birklea Street. | 1, Wootton Street. |
| 1, Faxfleet Street. | |

EXCHANGE WARD.

- | | |
|----------------------------|----------------------|
| 1, Belmont Street. | 1, Frederick Street. |
| 1, East Street. | 1, Dryden Street. |
| 1, Cross Frederick Street. | |

BRADFORD MOOR WARD.

- | | |
|--------------------|--------------------|
| 1, Dick Lane. | 1, Leeds Road. |
| 1, Leach Square. | 1, Herbert Place. |
| 1, Rufford Street. | 1, Parsonage Road. |
| 1, Heath Street. | |

MANNINGHAM WARD.

- | | |
|-----------------------|------------------------|
| 1, Arcadia Street. | 1, Springfield Street. |
| 1, Isaac Street. | 1, Wallis Street. |
| 1, Salt Street. | 1, Bowland Street. |
| 2, Tile Street. | 1, Kensington Street. |
| 1, Woodlands Road. | 1, St. Jude's Place. |
| 2, Arthington Street. | 1, White's Terrace. |
| 1, Jarratt Street. | |

BOLTON WARD.

- | | |
|----------------------|----------------------|
| 2, Bolton Hall Road. | 2, Manningham Lane. |
| 1, Lupton Street. | 1, Cornwall Terrace. |
| 1, Valley Road. | 1, Midland Road. |
| 1, Bute Street. | |

HEATON WARD.

1, Chassum Street.	1, Rose Bank.
1, Devonshire Terrace.	1, Westbourne Road.
1, Lily street.	1, Blenheim Road.
1, Victor Terrace.	1, Heidelberg Road.
1, Cliffe Villas.	1, Toller Lane.
1, Fairfield Road.	

ALLERTON WARD.

1, Argyle Street.	1, Snakehill Lane.
1, St. Leonard's Road.	1, Four Lane Ends.
1, Dean Lane Head.	

SMALLPOX.—There was only one outbreak of this disease in Bradford in 1896. The sufferer, Thomas Davy, a labourer, lodging in Bell Street, had become infected whilst working for a Bradford Contractor in Gloucester, where a severe epidemic of Smallpox was then raging. Having finished the work he was engaged for he returned to his lodgings in Bradford on the 16th of March, and shared a bedroom with a fellow labourer. On the 19th inst., he became ill and on the 23rd was found to be suffering from a severe attack of Smallpox. Removal to the temporary Smallpox Hospital at Scholemoor was quickly effected, but the poor fellow rapidly became worse and died on the evening of the 25th. Davy said he had been vaccinated when a child but there was no evidence (vaccination marks) of vaccination having been successfully carried out

The man with whom Davy had been lodging was taken to live at Bierley Hall, and found work on the estate, but he, too, on April 6th, or the 14th day after his last exposure to infection, developed Smallpox; his attack happily proved to be a mild one and I was able to discharge him after detention of 28 days.

The house from which these men had been removed was thoroughly cleansed and disinfected, and the sole occupant, a woman, kept under close observation for 16 days. These measures promptly taken, I am of opinion prevented a more or less widely spread epidemic to the district from which the first case was removed.

Vaccination.

The return for the year ending December, 1895, as to Vaccination supplied by the Clerk to the Guardians to the Local Government Board shows, I regret to say, continued neglect of the Vaccination Laws. Reference to this return in the appendix, demonstrates the lamentable fact that only 73·1 per cent of the children born in Bradford during 1895 were “accounted for” as regards Vaccination, in other words that without having any excuse for their action the parents of over 26 per cent. of the children failed to comply with the law. The accumulation, year by year, of large numbers of children unprotected by Vaccination against attack by Smallpox constitutes a serious menace to the public health. The introduction of Smallpox infection amongst such a community might, and probably would, light up such an epidemic of Smallpox as has lately been witnessed in the City of Gloucester, a City which had for years neglected the practice of Vaccination.

NOTIFICATION OF INFECTIOUS DISEASES. — There were reported during the year 833 cases of Infectious Diseases, Scheduled under the Infectious Diseases Notification Act, 1889, a slight increase upon the total for the previous year.

TABLE XXVIII.

MONTH.	1893.	1894.	1895.	1896.
January	108	241	103	79
February	116	175	60	65
March	122	130	48	60
April	135	126	42	43
May	175	173	64	50
June	199	117	36	76
July	528	118	72	75
August... ..	321	112	57	71
September	275	108	66	91
October	306	104	113	85
November	421	119	18	72
December	208	74	62	66
	2914	1597	805	833

The diseases were specified as follows : -

	1893.		1894.		1895.		1896.
Scarlet Fever ...	1445	...	1035	...	379	...	397
Typhoid Fever ...	215	..	141	...	177	...	152
Typhus Fever ...	—	...	—	...	—	..	—
Smallpox ...	995	...	196	...	—	...	1
Continued Fever...	5	...	2	...	—	...	2
Relapsing Fever...	1	...	—	.	—	...	—
Puerperal Fever ...	18	...	22	...	22	...	18
Diphtheria ...	71	...	49	...	39	...	41
Membranous Croup	18	...	8	...	17	...	12
Erysipelas ...	146	...	144	...	169	...	210
English Cholera ...	—	...	—	...	2	...	—
	<u>2914</u>		<u>1597</u>		<u>805</u>		<u>833</u>

The Table following gives the number of notified cases of Scarlet Fever, together with the number of deaths, and death-rate for each year since 1870.

TABLE XXIX.--Scarlet Fever.

YEAR.	No. of Deaths.	No. of Notification	Death-rate per 10,000 living.
1870	241	...	16.93
1871	144	...	9.79
1872	81	...	5.53
1873	47	...	3.00
1874	289	..	17.72
1875	458	...	27.21
1876	143	...	8.23
1877	110	...	6.13
1878	156	...	8.42
1879	184	...	9.45
1880	190	...	9.64
*1881	118	(6 mos) 424	6.41
1882	66	408	3.29
1883	36	352	1.75
1884	33	493	1.54
1885	46	786	2.15
1886	89	1118	4.06
1887	98	1308	4.37
1888	33	407	1.43
1889	63	543	2.68
1890	46	546	1.91
1891	143	1163	6.59
1892	45	944	2.05
1893	71	1445	3.20
1894	72	1035	3.21
1895	25	379	0.11
1896	24	397	1.04

* First Year of Notification.

TABLE XXX.

Notifications, Deaths, and Death-rate from Scarlet Fever at different Age Periods during 1896.

AGES.	Notifications.	Deaths.	Death-rate per 100 notified.
Under 1 year	2	1	50.00
1 year and under 2	13	5	38.46
2 years ,, ,, 3	29	1	3.44
3 years ,, ,, 4	32	4	12.50
4 years ,, ,, 5	49	4	8.16
5 years ,, ,, 10	186	7	3.76
10 years ,, ,, 15	50	1	2.00
15 years and upwards	36	1	2.77
TOTALS	397	24	6.04

Shewing the number of Notifications from each Disease during 1896 in the different Wards.

WARDS.	Smallpox.	Scarlet Fever.	Typhoid Fever.	Typhus Fever.	Diphtheria	* Erysipelas	* Puerperal Fever.	* M'branus Group.	* Continued Fever.	Relapsing Fever.	TOTAL.
North	13	8	...	2	7	...	1	...	...	31
South	5	5	...	2	12	...	...	...	...	24
East	16	6	...	2	9	1	...	...	...	34
West	1	8	12	...	2	26	1	...	...	...	50
Listerhills	16	24	...	1	23	...	...	...	...	64
Great Horton	41	8	...	6	14	2	4	1	...	76
Little Horton	14	12	...	4	19	3	2	1	...	55
East Bowling	33	12	...	5	18	1	...	...	...	69
West Bowling	27	13	...	4	8	5	1	...	...	58
Exchange	2	5	...	...	6	1	...	...	...	14
Bradford Moor	39	7	..	4	14	...	2	...	...	66
Manningham	60	15	...	4	21	2	..	...	...	102
Bolton	43	9	...	2	3	...	2	...	...	59
Heaton	60	11	...	3	14	2	...	...	...	90
Allerton	20	5	...	...	16	...	...	...	...	41
BOROUGH TOTALS ...	1	397	152	—	41	210	18	12	2	—	833

* Notification of these diseases brought into force Feb. 1st, 1893.

TABLE XXXII.

Showing the Death-rate per 1,000 in Bradford, and in each of its 15 Wards from Zymotic Diseases, and from all causes during 1887—1896.

WARDS.	Seven Principal Zymotic Diseases.															All Causes.									
	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.					
North ...	2.4	1.4	3.0	3.5	1.7	2.2	3.4	1.4	2.1	1.1	27.4	20.1	21.7	24.9	25.1	21.6	23.4	19.0	17.1	20.7					
South ...	3.2	2.0	1.8	2.6	2.0	2.1	4.4	2.0	3.7	3.3	24.5	20.1	23.3	25.9	25.3	20.6	25.1	18.9	25.2	19.6					
East ...	2.4	0.9	1.3	1.4	1.8	1.9	1.6	1.2	1.3	1.0	16.3	16.2	17.2	18.9	21.6	16.6	17.8	15.5	19.3	16.5					
West ...	5.1	1.7	3.7	3.5	2.3	1.5	4.9	2.0	3.6	0.8	24.5	18.0	25.8	27.0	24.8	20.0	23.7	18.6	24.1	18.1					
Listerhills ...	1.7	1.1	2.6	1.2	1.3	0.7	1.0	1.4	1.9	0.9	16.4	16.3	18.6	21.2	22.4	18.1	18.6	15.8	17.1	14.3					
Great Horton...	3.4	1.1	2.3	0.7	2.7	1.3	2.7	1.5	1.9	1.6	20.7	15.2	18.7	19.0	20.4	17.9	17.5	16.9	19.2	17.2					
Little Horton	2.1	1.6	3.4	2.0	1.5	1.8	2.8	1.8	2.6	2.2	15.9	16.3	15.6	19.2	21.1	19.0	20.3	16.8	18.6	18.3					
East Bowling .	2.6	2.6	2.3	4.0	2.5	1.4	3.9	2.9	3.2	2.4	22.3	13.4	23.4	24.1	24.5	17.6	20.3	18.7	22.6	19.9					
West Bowling	2.3	3.1	4.1	1.4	2.0	1.8	4.5	1.8	2.4	1.6	17.3	17.8	18.9	18.8	21.9	11.4	21.4	18.3	21.3	18.0					
Exchange ...	2.4	1.8	4.6	3.2	1.1	2.5	3.0	1.9	2.3	1.3	24.9	27.5	26.1	28.3	19.4	20.8	22.2	16.0	19.3	19.8					
Bradford Moor	3.1	2.4	2.1	2.0	2.1	1.1	2.8	2.1	3.6	1.6	22.1	21.2	20.6	20.4	24.6	17.2	20.3	17.4	20.3	16.6					
Manningham ..	3.0	1.1	2.7	1.9	3.1	0.9	3.3	1.8	3.0	1.4	19.1	14.3	17.2	18.7	22.1	17.6	20.2	18.9	19.8	16.3					
Bolton ...	3.0	0.5	1.5	1.9	0.7	2.0	2.6	1.0	1.5	0.4	16.2	13.6	14.4	17.9	15.3	14.3	19.7	14.5	14.8	11.8					
Heaton ...	2.9	0.5	2.9	1.0	2.3	1.1	2.7	0.9	1.2	0.5	18.5	13.7	15.6	15.8	19.1	14.3	17.4	12.9	15.3	11.8					
Allerton ...	1.8	1.2	1.9	1.1	1.7	1.0	3.2	1.3	1.9	1.3	16.1	14.2	14.8	16.6	18.4	15.7	21.2	12.4	16.4	14.1					
BOROUGH TOTAL.	2.8	1.6	2.65	2.08	2.35	1.46	3.22	1.65	2.47	1.50	19.86	17.15	19.11	20.14	22.12	17.91	20.90	16.95	19.80	16.77					

PHTHISIS.—The deaths attributed to this disease amounted to 366, as compared with 367 for the previous year. The accompanying Chart shows that apart from the large increase in the number of deaths from this disease during the Influenza Epidemic of 1889-90-91, there has been a steady though small diminution in the Mortality from Phthisis.

CHART B.
DEATHS FROM PHTHISIS.

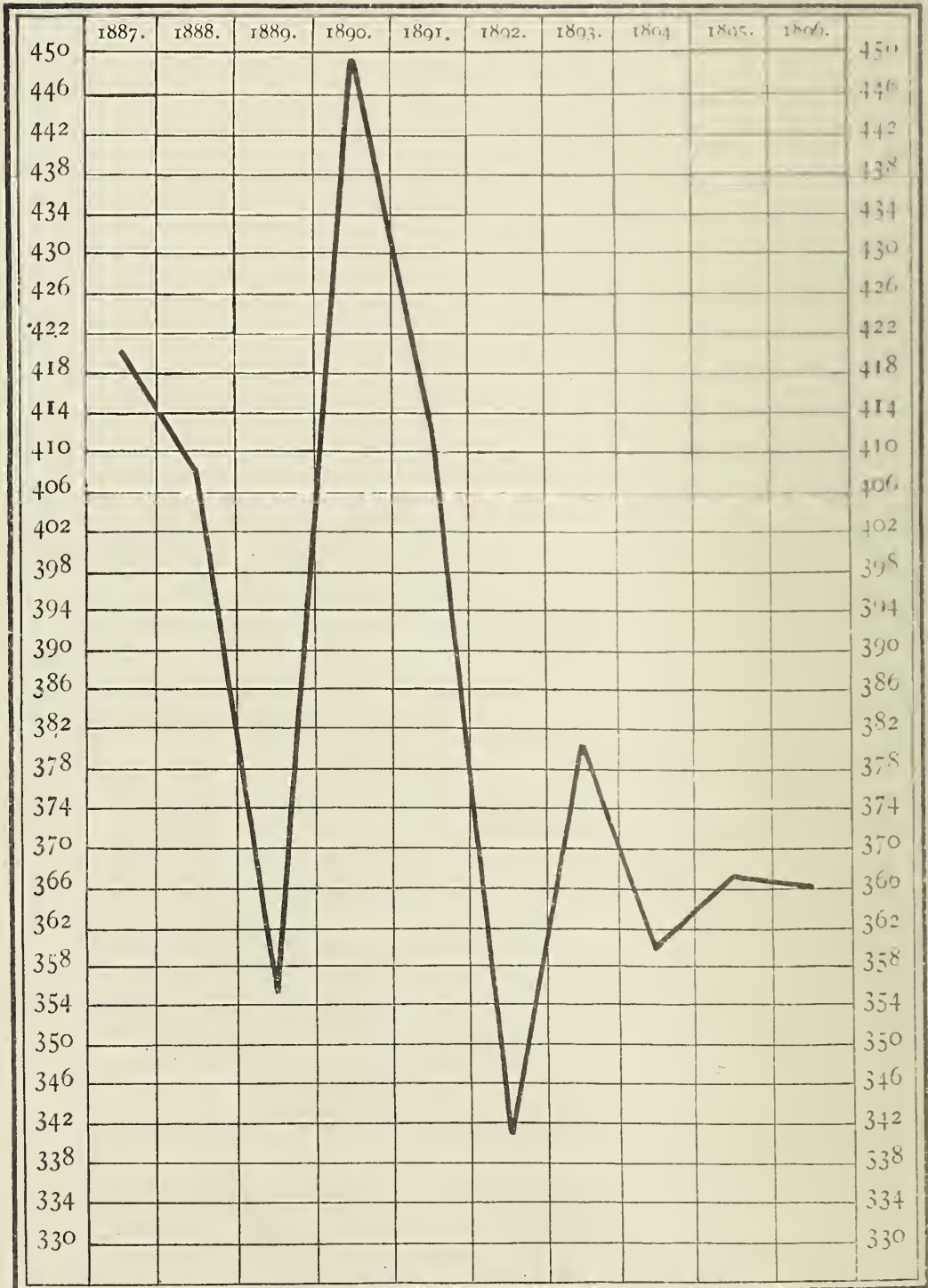


TABLE XXXIII.
Deaths from Phthisis.*

WARDS.	QUARTERS.								Year 1896.		
	March-		June.		Sept. 14 weeks.		Dec.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
North	5	3	7	2	2	2	3	2	17	9	26
South	8	7	2	3	5	3	5	2	20	15	35
East	9	2	4	2	2	1	1	9	16	14	30
West	6	5	4	4	5	6	4	3	19	18	37
Listerhills	4	4	9	1	5	6	5	6	23	17	40
Great Horton ...	1	5	3	2	3	...	3	1	10	8	18
Little Horton ...	2	3	2	1	4	2	3	1	11	7	18
East Bowling ...	2	5	8	...	1	3	...	3	11	11	22
West Bowling ...	5	5	4	2	8	4	4	1	21	12	33
Exchange	3	2	2	4	..	...	4	2	9	8	17
Bradford Moor ...	3	3	4	5	8	...	3	4	18	12	30
Manningham ...	3	4	6	1	2	5	2	3	13	13	26
Bolton	4	...	3	...	3	2	...	1	10	3	13
Heaton... ..	2	...	2	2	3	1	2	2	9	5	14
Allerton ... ..	...	1	...	2	2	...	2	...	4	3	7
BOROUGH TOTAL	57	49	60	31	53	35	41	40	211	155	366

Ages at Death.

Under 1 Year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
2	2	1	1	...	2	7	37	96	90	68	60	366

*Deaths in Public Institutions are referred to in the Wards
from whence the patients came.

TABLE XXXIV.

*Deaths from other Tuberculous Diseases.**

WARDS.	Tuberculous Diseases.		Tabes Mesenterica.		Hydrocephalus.		1896.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
North	4	1	...	3	...	...	4	5	9
South ... ..	...	2	...	...	...	4	...	6	6
East	1	2	5	1	1	2	7	5	12
West	3	2	...	...	1	1	4	3	7
Listerhills ... ..	...	2	2	...	...	3	2	5	7
Great Horton	1	...	...	...	...	...	1	...	1
Little Horton ... ..	...	...	...	...	6	6	6	6	12
East Bowling ... ..	...	...	...	...	2	...	2	...	2
West Bowling ... ..	...	...	1	...	1	2	2	2	4
Exchange ... ..	...	...	...	...	...	...	...	...	...
Bradford Moor	3	1	3	3	2	1	8	5	13
Manningham	1	1	2	3	2	1	5	5	10
Bolton ... ..	...	...	...	...	3	2	3	2	5
Heaton ... ..	...	1	...	...	2	3	2	4	6
Allerton	1	...	1	...	...	...	2	...	2
BOROUGH TOTAL	14	12	14	10	20	26	48	48	96

* Deaths in Public Institutions are referred to in the Wards from whence the patients came.

BRONCHITIS, PNEUMONIA AND PLĒURISY.—To these there were due 702 deaths, a decrease of 159 upon the total for the year 1895. The death-rate from these three diseases alone, was equal to 3·0 per 1000 of the population.

CANCER.—The synopsis appended shows that there has been during recent years a material increase in the number of deaths from this form of disease. This inexplicable fact is not confined to Bradford, nor to the United Kingdom, but is noticed in the death statistics of most European Countries. The Colonies too are not exempt from the scourge, and I notice that in a report on the health of New South Wales, published by the Government Statistician, the death-rate from cancer has steadily increased from $\cdot 14$ per 1000 of the population in 1856, to $\cdot 42$ per 1000 in 1894.

TABLE XXXV.

Synopsis of Deaths from Cancer during the Years 1887-1896.

	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Total No. of Deaths ...	122	129	137	129	142	159	129	146	182	182
Males	29	28	50	52	44	52	40	44	60	64
Females	93	101	87	77	98	107	89	102	122	118

VIOLENCE.—Various forms of violence, 108 deaths, 23 of which were of children under 5 years of age. Of the 108 deaths, 45 were attributed to fractures and contusions, 19 to burns and scalds, and 12 to accidental suffocation.

Inquests.

Two hundred and thirty-five inquests were held by the City Coroner during the year, as compared with 259 for the previous year. Fifty-four of the inquests were upon children under 5 years of age.

Uncertified Deaths.

The deaths of 29 persons were registered without certificate from a Medical Practitioner or Coroner, consisting of $\cdot 7$ per cent. of the total deaths; the average for the thirty-three great towns being $2\cdot 1$ per cent.

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Year 1896.

TOWNS.	Estimated Population middle of 1896.	Births.	Deaths.	Annual Rate per 1,000 living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under 1 year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Zymotic Diseases.										
33 Towns	10,846,971	339,115	208,534	30.7	18.9	2.86	31,550	25	7,839	2,406	4,202	6,245	2,073	8,760	167	1.5
32 Provincial Towns	6,425,016	203,319	125,023	31.1	19.1	2.67	17,450	16	4,142	1,464	1,519	3,308	1,464	5,537	172	2.1
London	4,421,955	135,796	83,511	30.2	18.6	3.14	14,100	9	3,697	942	2,683	2,937	609	3,223	161	0.6
West Ham	261,297	8,658	4,268	32.6	16.1	3.00	797	4	117	55	187	158	61	215	165	3.7
Croyden	118,006	3,009	1,706	25.1	14.2	1.94	233	...	67	5	29	62	18	52	150	...
Brighton	120,499	3,022	1,975	24.7	16.1	1.63	199	...	55	6	19	32	14	73	135	1.7
Portsmouth	178,639	5,006	3,009	27.6	16.6	2.11	383	...	125	20	20	52	27	132	154	0.7
Plymouth	90,276	2,643	1,796	28.8	19.6	2.30	210	..	95	3	13	17	6	76	178	0.5
Bristol	230,623	6,465	3,961	27.6	16.9	1.90	444	5	143	59	37	61	18	121	142	1.2
Cardiff	162,690	5,591	2,784	33.8	16.8	2.27	376	3	38	28	62	105	13	127	165	1.3
Swansea	98,645	3,061	1,689	30.5	16.8	1.18	118	2	6	4	10	56	15	25	161	1.1
Wolverhampton ...	86,530	3,023	1,755	34.1	20.0	3.11	274	...	9	21	53	31	36	127	184	1.3
Birmingham	501,241	16,603	10,600	32.6	20.8	3.57	1,823	..	307	148	270	378	107	613	107	5.0
Norwich	108,630	3,400	1,919	30.8	17.4	2.33	257	...	117	4	24	9	21	82	164	1.6

Leicester	...	198,659	6,212	3,376	30·8	16·7	2·97	599	...	121	50	64	51	40	273	187	2·7
Nottingham	...	229,775	6,758	4,087	28·9	17·5	2·47	575	...	205	26	13	90	79	162	168	1·4
Derby	...	101,770	2,901	1,619	28·0	15·7	1·91	197	...	34	11	10	54	21	67	151	0·4
Birkenhead	...	109,343	3,527	2,133	31·7	19·2	2·97	330	..	115	32	22	59	26	76	177	1·0
Liverpool	...	632,512	22,416	14,617	34·9	22·7	3·01	1,938	...	306	227	157	294	206	748	173	3·4
Bolton	...	120,380	3,831	2,536	31·3	20·7	2·80	344	...	6	40	14	102	48	134	168	0·3
Manchester	...	529,561	17,787	12,184	33·0	22·6	3·42	1,834	...	570	197	81	360	122	504	176	1·3
Salford	...	210,707	7,480	4,848	34·9	22·6	4·10	879	..	202	104	49	189	71	264	199	2·1
Oldham	..	143,442	3,971	2,955	27·2	20·3	2·91	425	...	167	56	35	53	23	91	184	0·3
Burnley	...	102,805	3,245	1,830	31·0	17·5	2·19	229	...	63	4	48	28	13	73	170	1·4
Blackburn	...	129,459	3,649	2,351	27·7	17·9	1·82	238	...	41	9	10	47	34	97	171	2·7
Preston	..	113,864	3,776	2,403	32·6	20·8	1·86	217	...	4	3	12	43	26	129	203	4·3
Huddersfield	...	100,463	2,096	1,682	20·5	16·5	1·60	163	...	28	19	21	55	13	27	160	2·5
Halifax	...	94,775	2,337	1,669	24·3	17·3	1·10	105	...	16	...	21	33	20	15	149	1·7
BRADFORD	...	228,809	5,945	3,838	25·9	16·7	1·50	344	1	105	24	12	105	28	69	142	0·7
Leeds	...	402,449	12,574	7,670	30·7	18·8	2·28	937	1	199	71	49	246	87	284	169	0·6
Sheffield	...	347,278	12,011	6,797	34·0	19·3	2·91	1,024	...	200	102	56	205	101	360	173	3·5
Hull	...	220,844	7,171	4,245	31·9	18·9	3·32	745	...	260	57	51	113	62	202	173	2·8
Sunderland	...	140,386	4,873	2,828	34·2	19·8	3·00	428	...	143	27	8	76	53	121	158	0·9
Gateshead	...	98,436	3,583	1,910	35·8	19·1	3·10	310	...	137	26	18	35	22	72	172	0·9
Newcastle-on-Tyne	...	212,223	6,701	3,981	31·1	18·5	2·08	450	...	139	26	39	103	33	110	165	0·5

Disinfecting Station.

The following Table sets forth the work done in connection with the Disinfecting Station during 1896.

Houses fumigated	429
Articles disinfected:—	
Beds	364
Mattresses	123
Pillows	669
Bolsters	285
Blankets... ..	584
Counterpanes	593
Curtains	7
Carpets	45
Rugs	44
Coats	103
Waistcoats	50
Trousers	65
Drawers	24
Flannel Vests	11
Dresses	74
Petticoats	75
Hose	102
Dressing Gowns	14
Shawls	123
Cushions	49
Mats and Sundries	1099
TOTAL	4503

Table A shews that 490 new houses have been erected during the year and certified as fit for habitation in accordance with the Bradford Waterworks and Improvement Act, 1875.

TABLE A.

Shewing number of New Buildings certified as fit for habitation in each of the Wards, and in the whole Borough, during the years 1889-96.

WARDS.	1889.	1890.	1891.	1892	1893.	1894.	1895.	1896.
North	29	9	...	64	43	8	11	2
South	92	104	104	69	35	16	1	6
East	78	77	20	49	98	54	45	26
West	4	3	...	3	4	9	...	...
Listerhills	82	173	72	30	17	13	3	48
Great Horton ...	27	67	59	37	53	106	134	70
Little Horton ...	16	15	40	42	4	19	21	33
East Bowling ..	27	31	61	48	60	78	15	18
West Bowling ...	162	187	98	59	103	115	58	72
Exchange	3	2	1	...	...	1	...	7
Bradford Moor ..	131	85	98	76	110	87	47	55
Manningham ...	76	130	125	116	148	44	67	94
Bolton... ..	86	41	48	30	20	24	13	7
Heaton	68	98	31	35	65	18	34	10
Allerton	57	48	69	16	22	49	47	42
BOROUGH TOTAL	938	1070	826	674	782	641	498	490

SANITATION.

Refuse Removal.

The present system of refuse removal was initiated many years ago, and although at that time it may have been considered a satisfactory one, there can be little doubt in the mind of any who have given much thought to the matter that it is becoming antiquated and is not such an one as is worthy of so large a city. Instead of having to depend upon the Nuisance Inspectors to report those Ashpits that require emptying in the more congested parts of the city and upon the particular request of many who live in the suburbs, there should be a systematic removal of refuse from the dust-bin or ash-place of every house.

This can be accomplished by having the city mapped out in sections and by so arranging the work that each section is cleared at regular intervals. Any exceptional case could be dealt with by means of a special cart kept for emergencies.

It is a moot point as to whether this work could best be done by the Corporation working directly or through a contractor, and upon this I do not propose to express any opinion.

Housing of the Working Classes.

The Housing of the Working Classes Acts, 1890 and 1894, consolidate and amend the previous Acts on the same subject. Houses unfit for habitation can be more satisfactorily dealt with by means of these Acts than by the Public Health Act. Their object is to bring about the closure of insanitary dwellings and their replacement by sanitary dwellinghouses. It is in force throughout the United Kingdom.

PART I.—UNHEALTHY AREAS. This part places upon the Medical Officer of Health the duty of making an official report to the Sanitary Authority when he finds that (*a*) any houses, courts or alleys, are unfit for human habitation, or that (*b*) the narrowness, closeness, and bad arrangement, or the bad condition of the streets and houses, or groups of houses within an area, or the want of light, air, ventilation, or proper conveniences, or any other sanitary defect, make the given area dangerous or injurious to the health of the inhabitants of the area, or of their neighbours : and that the evils connected with such houses, courts, or alleys, cannot be effectually remedied otherwise than by an improvement scheme for their re-arrangement and re-construction : the Authority, if satisfied of the truth of the information thus given them, and of the sufficiency of their resources, are required to make a scheme for the improvement of the area. The Medical Officer of Health is required on complaint from ratepayers to report on the condition of any area complained of as being unhealthy. The improvement scheme must provide for the rehousing of the members of the working classes displaced by it. In assessing compensation to be paid owners of houses in the condemned area, deductions are made for sanitary defects, and where a house cannot reasonably be made fit for human habitation, only the value of land and building materials need be paid.

PART II.—UNHEALTHY DWELLING-HOUSES.—It is made the duty of the Medical Officer of Health of every District to officially inform his Authority of any dwelling-house which appears to him in a state so dangerous or injurious to health as to be unfit for human habitation ; and he may be called upon on complaint of householders to report on the condition of any house. The Authority are required to cause inspections to be made from time to time of their District, to ascertain whether any dwelling-house is unfit for human habitation, and they must forthwith take the necessary proceedings, before a Justice, to obtain a closing order on receiving a report of a house unfit from their Officer. When a closing order has been made, and the Authority are of opinion that the dwelling-house has not been

rendered fit for human habitation, they may order the demolition of the building, time being given the owner to attend and state his objections. It is also made the duty of the Medical Officer of Health to officially inform his Authority of "obstructive" buildings. If any building in his District, though not in itself unfit for human habitation, stops ventilation, or otherwise conduces to make other buildings unfit for human habitation, or prevents proper measures being taken to abate nuisances, it is his duty to report the facts to his Authority, who shall order the demolition of the buildings, after compensating the owner.

PART III. -- This gives to the Sanitary Authority the power of erecting dwellings for the benefit of the labouring classes. It is an "adoptive" part of the Act and is not in force unless adopted by special resolution of the Sanitary Authority.

Food Poisoning.

During the month of September there occurred several cases of poisoning by cream obtained from cows which had been overdriven to a local country cattle market and not milked for about two days. Fortunately none of the cases ended fatally, although in one instance the issue was for a few days in doubt. A detailed examination of the cream was made, but owing, probably to its having been five days old before being submitted to examination, the cause of the poisoning was not discovered. A Report of the Bacteriological and Chemical Examination, together with a circular addressed by me to the medical practitioners in the City, will be found in the appendix.

ICE-CREAM POISONING.—A quantity of this delicacy supplied by an ice-cream vendor in Manchester Road caused the death of one person and the serious illness of thirty or forty others. The symptoms produced were those of irritant poisoning, but I had no opportunity to make an examination of the noxious material. Inspection of the premises showed that the ice-cream had been manufactured close to the open mouth of a drain, under such conditions as would not be permitted if there existed powers to register people engaged in the business.

REPORT

OF THE

CHIEF INSPECTOR OF NUISANCES.

TO THE MEDICAL OFFICER OF HEALTH,

SIR,—The following statement shews the nature and amount of work done in the Sanitary Department during the year 1896, including an abstract of work carried out in the previous nine years.

<i>Particulars of work done.</i>	<i>No. of Cases</i>									
	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Drains opened and cleansed ...	1125	1011	1356	1298	1429	1178	1236	1518	1573	1710
Drains provided for premises which had been previously without drainage	36	41	17	13	17	32	16	87	29	50
Sink drains disconnected from the sewer or otherwise effectually trapped	788	345	623	871	632	508	365	565	341	377
Street gullies cleansed	2656	2976	2184	2867	3648	3602	4064	4831	4237	3927
Water Conductors provided and down spouts connected with the drains	665	828	1062	1251	1143	1127	947	1977	2105	1980
Swine and Swine Styes removed from objectionable situations	45	45	24	30	29	13	31	20	35	41
Fowls, etc., removed from dwelling-houses	114	99	162	219	114	127	87	144	113	90
Accumulations of offensive matter removed	193	187	479	596	689	399	257	317	409	497
Filthy Yards and Passages cleansed	508	416	484	578	1099	561	481	955	753	808
Surface of back yards and defective pavement repaired... ..	125	143	219	270	191	199	287	395	335	433
Defective Water Closets repaired	119	114	236	100	111	137	216	310	549	763

No. of Cases.

<i>Particulars of work done.</i>	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Stagnant Water removed from Ashpits	214	251	495	376	345	286	285	419	292	295
Privies and Ashpits repaired and provided with suitable doors and covers	927	1051	1177	957	779	924	964	1623	1698	1505
Foul Urinals repaired	25	30	32	35	20	13	46	32	47	73
Filthy Cellar Areas cleansed	71	131	80	81	84	74	57	85	79	80
Offensive Manure Pits removed	38	36	46	48	26	27	27	29	39	29
Defective Baths and Wash Basins repaired and disconnected from the drains	155	124	35	54	25	59	51	77	49	55
Privies and Ashpits removed from objectionable positions and re-constructed on improved sites	326	334	370	391	205	196	2	291	40	67
New Water Closets erected	159	120	156	179	242	321	507	378	425	492
Stagnant Water drained off premises	101	133	130	132	92	83	132	190	238	166
Filthy Privies cleansed and lime-washed	939	1327	1198	1167	1148	1026	1063	1365	1129	922
Houses and Cellar Dwellings white-washed... ..	151	224	295	283	237	258	254	341	203	165
Houses and Cellar Dwellings disinfected	1081	456	639	532	1081	779	1979	1015	451	392
Houses closed unfit for human habitation ... ..	...	...	5	16	13	8	1	20	1	61
Cellar Dwellings closed as unfit for human habitation	1	2	15	11	18	9	1	16	...	2
Workshops closed as unfit for human habitation ... ..	...	...	...	...	...	...	...	...	3	...
General repairs of houses... ..	27	71	42	34	29	42	36	78	149	56
Improvement and Ventilation of premises by the removal of out-buildings, etc., from back yards	127	172	197	127	81	92	20	54	91	65
Abatement of Nuisances from over-crowding of houses, etc.	15	14	18	41	26	24	24	24	12	18
Foul Wells closed ... ..	...	...	...	...	...	2	...	2	2	6

No. of Cases.

<i>Particulars of work done.</i>	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Offensive businesses discontinued ...	...	1	2	...	2	2	1	...	...	...
Foul Mill Dams cleansed... ..	2	1	1	2	1	1	4	...	2	2
Rag Warehouses cleansed ...	14	21	2	6	...	4	2	2	2	4
Tripe Boilers' premises inspected	301	343	209	88	107	86	112	243	44	475
Fellmongers' premises inspected	14	97	194	10	24	34	12	20	12	21
Houses inspected where infectious diseases have occurred...	1180	399	563	522	1148	1031	2606	2670	709	724
Bakehouses inspected ... ..	...	...	11	33	62	43	34	25	28	24
Mills and Workshops Closets inspected ... ..	...	...	...	...	1613	269	140	509	349	357

The above particulars represent only those cases where Statutory Notices have been served and do not include Nuisances prevented or abated on the verbal request of the Inspectors.

The number of persons summoned for non-abatement of Nuisances after Notices given is forty-six.

Night Scavenging.

During the year the Contractors have according to the returns of the Sanitary Officers, emptied 91,706 ash-pits and removed therefrom 5,533 loads of soil, and 63,486 loads of rubbish, a total of 69,019 loads.

Burial Grounds.

During the year 145 visits have been made by the Sanitary Officers to the various graveyards within the Borough, but no irregularities have been observed.

Dangerous and Unfenced Places.

Three hundred and sixteen places, including houses and other buildings, have been reported by the Sanitary Officers as

being in a dangerous condition. These have been dealt with and made secure from personal danger, either under the direction of the Borough Surveyor or the Chief Inspector of Nuisances.

Public Urinals.

The number of Public Urinals within the Borough is 38, as against 40 last year.

During the year three Public Urinals have been removed by order of the Sanitary Committee on the grounds of their occupying improper positions, viz. : one from Tetley Street, one from Westholme Street, and one from the Workhouse grounds at Little Horton Lane. The latter has since been re-erected at Thornton Road, on premises belonging to Messrs. E. and W. H. Haley, ironfounders, who kindly gave their consent thereto.

Arrangements have been made for the erection of a Public Urinal near the Brownroyd Hotel, Thornton Road, by permission of the owners of the premises, Messrs. Wm. Whitaker and Co., and also one at Great Horton Road, opposite Park Avenue, by permission of the Trustees of the late George Turner, Esq.

Canal Boats.

There is only one Canal Boat registered with the Borough, and this, along with 207 others registered with other Authorities, but plying on the Canal within the Borough, has been examined by Mr. Rhodes, the Canal Boats Inspector, and all boats inspected were free from bilge water, ventilation very good, and suitable provision for the storage of water for domestic use. In 12 cases the boats were found to be not in accordance with the Regulations, 4 having defective decks, 2 defective chimneys, 3 cabins required painting, and 3 had no certificate of registration on board. The master of one boat was summoned before the Justices for having the cabins in dirty condition, and also

with failing to produce certificate of registration when requested so to do by the Officer, and a penalty of 5s., and 8s. 9d. costs in each charge were inflicted.

The owners of the other defective boats were formally notified by the Chief Inspector of Nuisances to have the boats thoroughly repaired, and accordingly the whole of the necessary repairs have since been carried out. The owners and masters of the boats where certificates of registration were not produced on request of the Officer were formally cautioned against a recurrence of the offence.

Common Lodging-houses.

The number of Common Lodging-houses within the Borough is 41, the same as last year.

The houses contain 192 rooms for sleeping purposes, and are registered to accommodate 1,903 persons nightly.

The number of persons who have been accommodated during the year is 437,881, the nightly average being 1,199.

The number of visits paid to these houses during the year by the Sanitary Officers is 1,972, and their reports, with one exception, shew the houses to have been fairly well conducted. One person was summoned and convicted by the Justices for allowing a greater number of lodgers to be accommodated than fixed and determined by the Common Lodging-house Regulations.

Adulteration of Food and Drugs.

During the year ending December, 1896, 269 samples of food have been submitted to the Borough Analyst by the Food Inspector for analysis. Of these 245 were certified by the Analyst as not adulterated, and 24 were found to be adulterated. Nine of the offenders were prosecuted before the Justices, seven of which were convicted, and penalties amounting with costs to £30 18s. were inflicted, two summonses were dismissed, one

person who refused to supply the Food Officer with a sample of margarine absconded, or legal proceedings would have been instituted against the offender. In 15 other cases the amount of adulteration was trivial, and did not warrant proceedings against the offenders beyond being formally cautioned against a repetition of the offence.

The Food Inspector seized and destroyed 111 boxes of kippers, 17 boxes of finnon haddock, 6 boxes of haddock, 1 box of cod fish, 20 boxes of bloaters, 9 bags of cockles, 3 bags of mussels, 3 bags of oysters, 38 bottles of pickled cabbage, 7 bottles of onions, 6 bottles of relish, 5 jars of marmalade, 3 jars of honey, 2 jars of preserved fruit, and 14 cases of tomatoes.

The following Table shews the nature of articles submitted for analysis, together with the amount of penalties inflicted against the offenders for the year ending 1896.

REPORT for year ending December, 1896.

NATURE OF FOOD.	Total.	Pure.	Adulterated.	Summoned.	Convicted.	Censured.	No proceed-ings.	Exposed with- out label.	Dismissed.	Penalties.		Costs.		REMARKS.	
										£	s. d.	£	s. d.		
Milk	200	177	23	8	6	..	15	..	2	23	0	5	10	0	
Butter	22	21	1	1	1	..	..	..	..	2	0	0	8	0	
Lard	13	13	..	..	..	..	..	..	..	..	..	..	..	..
Pepper	4	4	..	..	..	..	..	..	..	..	..	..	..	..
Baking Powder	5	5	..	..	..	..	..	..	..	..	..	..	..	..
Ginger	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Sugar	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Whisky	2	2	..	..	..	..	..	..	..	..	..	..	..	..
Flour of Brimstone	3	3	..	..	..	..	..	..	..	..	..	..	..	..
Milk of Sulphur	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Coffee	2	2	..	..	..	..	..	..	..	..	..	..	..	..
Flour	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Sweets	2	2	..	..	..	..	..	..	..	..	..	..	..	..
Ice Cream	6	6	..	..	..	..	..	..	..	..	..	..	..	..
Mustard	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Cocoa	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Green Peas	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Olive Oil...	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Nitre	2	2	..	..	..	..	..	..	..	..	..	..	..	..
*Margarine	..	..	..	1	..	..	..	1	..	..	..	..	..	..
Totals	269	245	24	10	7	..	15	1	2	25	0	5	18	0	

* Refused to supply, afterwards absconded.

Dairies, Cow-sheds, and Milk-shops.

There are at present within the Borough, registered under the "Contagious Diseases (Animals) Act, 1878," 246 Cow-sheds, and 1,068 Dairies, Milk-shops, and Purveyors, as against 249 and 1,075 respectively last year.

During the year 118 applications have been made for registration of premises for the sale of milk, and upon inspection by the Medical Officer of Health or the Dairies and Cow-sheds Inspector, 24 of these were found to be suitable, and were registered accordingly. Seven milk dealers have during the year voluntarily given up their premises, which were found to be unsuitable, and have since been registered for other premises more compatible with the proper preservation of the cleanliness of the milk and milk vessels used therein.

Inspection has been frequently made as heretofore of the milk and milk vessels coming into the town by railway and otherwise from places beyond the Borough, and numerous samples thus delivered have been taken by the Food Inspector, and the results with one exception shew the milk to have been genuine and of good quality.

One milk dealer whose milk vessels were found to be in dirty condition was summoned before the Justices, and a penalty inflicted, and two others appeared before the Sanitary Committee, and were cautioned against repeating the offence.

One cow-keeper was summoned before the Justices for neglecting to make the necessary improvements to his cow-sheds after notice had been given requiring him so to do, and a penalty of 5s. and 12s. costs were inflicted.

Special attention has again been paid to the Fried Fish Shops and Ice Cream Makers' premises within the Borough, and it is satisfactory to note that considerable improvement has been

effected in these places in regard to cleanliness, and more careful manipulation of the commodities produced thereat.

The number of visits and inspections made by the Officers has been as follows:—Cow-sheds, 910; Milk-shops, 2,792; and Milk-vessels, 1,487.

Inspection of Meat, Slaughter-houses, Potted Meat and Sausage Manufactories.

There have been 129 seizures of Unsound Meat, Fish, and Fruit. In one case the offender was summoned before the Justices for exposing for sale a quantity of rabbits which were unfit for human food, and a penalty amounting with costs to £5 8s. was inflicted.

There have been seized and destroyed 8,660 lbs. of beef, 890 lbs. of mutton, 745 lbs. of veal, 10,592 lbs. of pork, 21,217 lbs. of fish, 179 boxes of kippers, 65 boxes of herrings, 10 boxes of mackerel, 5 barrels of oysters, 14 bags of cockles, 53 bags of mussels, 16 baskets of mushrooms, 30 cases of onions, 147 rabbits, 97 hares, 22 pheasants, and 11 brace of grouse.

The above seizures are exclusive of those made by and specified in the Food Inspector's Report.

The number of Slaughter-houses under the old regulations is 7, and there are 4 others for which licences have to be applied for annually, being one less than last year, the licence referred to having lapsed by reason of the death of the occupier, and no application having been made by his successor for a renewal thereof within the period allowed by Act of Parliament.

The number of places at which Potted Meat and Sausages are made is 76, as against 71 last year. These places are regularly visited and reported upon by the Inspectors.

The number of visits made during the year has been as follows:—Private Slaughter-houses, 365; Potted Meat and Sausage Works, 1,221. The Public Abbatoirs are visited daily.

Cattle Disease.

During the year there have been four outbreaks of Swine Fever within the Borough, 72 animals being affected with the disease, all of which died or were compulsorily slaughtered, and the carcasses burned at the Corporation Refuse Destructor Works, under the supervision of the Officers of the Board of Agriculture.

There has been one outbreak of Sheep Scab, viz., at the farm premises at Shuttleworth Hall, Fairweather Green, in the occupation of Mr. Frank Dickenson, 72 animals being affected with the disease, all of which were isolated and periodically visited and examined either by the Veterinary Surgeon, Mr. Collins, or the Cattle Inspector, until the disease disappeared.

Another case of Farcy occurred at Messrs. North & Sons' Dye Works, Fairweather Green, one horse being affected with the disease, the animal was slaughtered by consent of the owners, and the carcass burned at the Hammerton Street Refuse Destructor, under the direction of the Cattle Inspector.

The Committee appointed in October last Mr. William Hemingway, as Meat and Cattle Inspector, in place of Mr. Elgin, who resigned the position in July last, he having been elected to carry out the duties of Meat Inspector to the Metropolitan Board of Works.

Yours obediently,

JAS. CHAMBERS.

REPORT

OF

MANAGER OF DESTRUCTOR WORKS.

Hamerton Street.

The number of loads of refuse destroyed is as follows :—

Ashpit Refuse	... ..	20,862
Markets Refuse	... ..	1376
Rubbish	... ..	1519
		<hr style="width: 50%; margin: 0 auto;"/>
Total	... ..	<u>23,757</u>

As against a total of 22,787 loads destroyed last year.

There has also been destroyed the carcasses of 3 horses, 9 beasts, 111 stones of beef, 9 calves, 17 sheep, 63 pigs, 5 goats, and 117 couples of rabbits; 58 boxes fruit, 3 tons carrots, 4 tons cabbage, 19 bags of cockles and mussels, 5 boxes of oysters, 2 cases of eggs, 13 stones of tongues, 901 dogs, 103 cats, 400 pairs of mattresses and 4 beds.

4159 tons of mortar have been made and sold, as against 2800 tons made and sold last year.

2826 loads of clinker have been sold during the year.

The works erected by Messrs. Currie & Rowlands, for the treatment of fish refuse continue to be carried on in a satisfactory manner.

During the year the whole of the Stable and Destructor Buildings has been put into good repair and painted.

Sunbridge Road.

The number of loads of refuse destroyed is as follows:—

Ashpit Refuse	...	...	16,422
Markets Refuse	...	...	576
Rubbish	...	...	509
			<hr/>
Total	...		<u>17,507</u>

As against a total of 17,574 loads destroyed last year.

There have also been destroyed the carcasses of 2 sheep and 2 pigs; 104 pairs of mattresses and 4 beds.

1294 tons of mortar have been made and sold, as against 720 tons made and sold last year.

Southfield Lane.

The number of loads of refuse destroyed is as follows:—

Ashpit Refuse	9879
---------------	-----	-----	------

As against 8141 loads destroyed last year.

There have also been destroyed 47 pigs, 10 dogs, 47 mattresses and 14 beds.

Cliffe Road.

The quantity of refuse destroyed is as follows:—

Ashpit Refuse	...	...	12,814
Markets Refuse	...	...	140
			<hr/>
Total	...		<u>12,954</u>

Compared with 7495 loads for last year.

There has also been destroyed the carcasses of 2 pigs, 1 goat, 16 fowls, 44 couples rabbits, 74 dogs and 69 cats; 21 beds and 88 pairs of mattresses.

17 tons of mortar has been made and sold.

During the year an Engine-house and Mortar-pan stand has been erected, and the works have been lighted by electricity, an Engine and Dynamo having been installed for the purpose. These extensions and improvements are now complete and are giving every satisfaction.

Yours obediently,

JOHN McTAGGART.

APPENDIX 1.

BRADFORD UNION.—Vaccination Report for the Year 1895.

ABSTRACT OF RETURNS made on the 8th day of February, 1897, by the Vaccination Officers of the Bradford Union, respecting the Vaccination of Children whose Births have been Registered from January 1st, 1895, to December 31st, 1895, inclusive.

Registration— Sub-Districts.	Number of Births registered from 1st Jan., 1895, to 31st Dec., 1895.	Number of these Births duly entered by 8th February, 1897, in "Vaccination Register."					Per centage of cases finally accounted for to total Births.	Number of these Births which on 8th Feb., 1897, remained unentered in the "Vaccination Register" on account (as shown by Report Book) of		All cases not accounted for in preceding columns.		
		Col. 10. "Successfully Vaccinated."	Col. 11.		Col. 13. "Dead Unvaccinated."	Total duly entered in the Register as finally accounted for.		Postponement by Medical Certificate.	Removals and Cases not found.			
			"Insusceptible of Vaccination."	"Had Small Pox."								
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Bowling ...	1015	616	7	...	151	774	76.25	13	70	...	...	158
2. Bradford East	1870	1070	8	...	310	1388	74.25	33	160	...	...	289
3. Bradford West	1501	910	3	...	241	1154	76.88	26	171	...	...	150
4. Horton ...	1205	563	7	...	202	772	64.0	11	97	...	.	325
TOTAL ...	5591	3159	25	...	904	4088	73.11	83	498	—	—	922

APPENDIX II.

**Analytical and Biological Report upon a Sample
of CREAM received from Dr. Evans, Medical
Officer of Health, Bradford, on the evening of
September 10th, 1896.**

The Cream was contained in an eight ounce medicine bottle and weighed $2\frac{1}{2}$ ounces.

THE BIOLOGICAL ANALYSIS showed entire absence of all or any vegetable or animal alkaloids; also the microbes present when grown in sterilised milk kept at different temperatures produced the ordinary lactic fermentation,—not a trace of poisonous or non-poisonous animal alkaloids (Ptomaines, &c). being formed.

In every case special research was made for Ptomaines of the Lacto-toxicon and Tyro-toxicon class (occurring in cream and milk poisoned by microbial action) and for Neuridine and Diamine Bases; in every case with a negative result.

The Cream when received was *very sour* and contained in every grain several millions of microbes (chiefly of the lactic and butyric acid species) and *it is quite possible that any bacterian poison originally present in the Cream may have been completely decomposed by this enormous multiplication of microbes.*

The butyric bacillus is notable for its power of bringing about the dissolution of a large number of organic compounds.

As the Biological Analysis failed to reveal any poison or poisonous germs, I resorted to a

CHEMICAL ANALYSIS.

The Cream gave:—

	Per cent.
Total Solids	41·9
Fat	35·0
Solids, not Fat	6·9
Mineral matter	·46

These results show that there is nothing abnormal in the composition of the Cream.

Special research was made for mineral or metallic irritant poisons with the result that *not a trace* of any of the following substances was found:—

Arsenic.	(Lead).
Mercury.	(Borax).
Copper.	(Boracic Acid).

The percentage of Ash is quite the average of that present in normal cream and indicates the absence of any appreciable amount of mineral or metallic substances.

F. W. RICHARDSON.

September 16th, 1896.

[*Copy of letter addressed to Medical Practitioners,
September 22nd, 1896.*]

TOWN HALL,
BRADFORD,

SEPTEMBER 22ND, 1896.

DEAR SIR,

You are doubtless aware that quite recently a serious case of poisoning by cream at Allerton was brought under my notice for investigation.

I regret to say that the result of my inquiries and examination was not so satisfactory as I could wish, the chief reason being that the cream had not been handed over to me, until a considerable time after the occurrence of the poisoning, when, owing to the changes that had taken place bacteriological examination failed to be of any service.

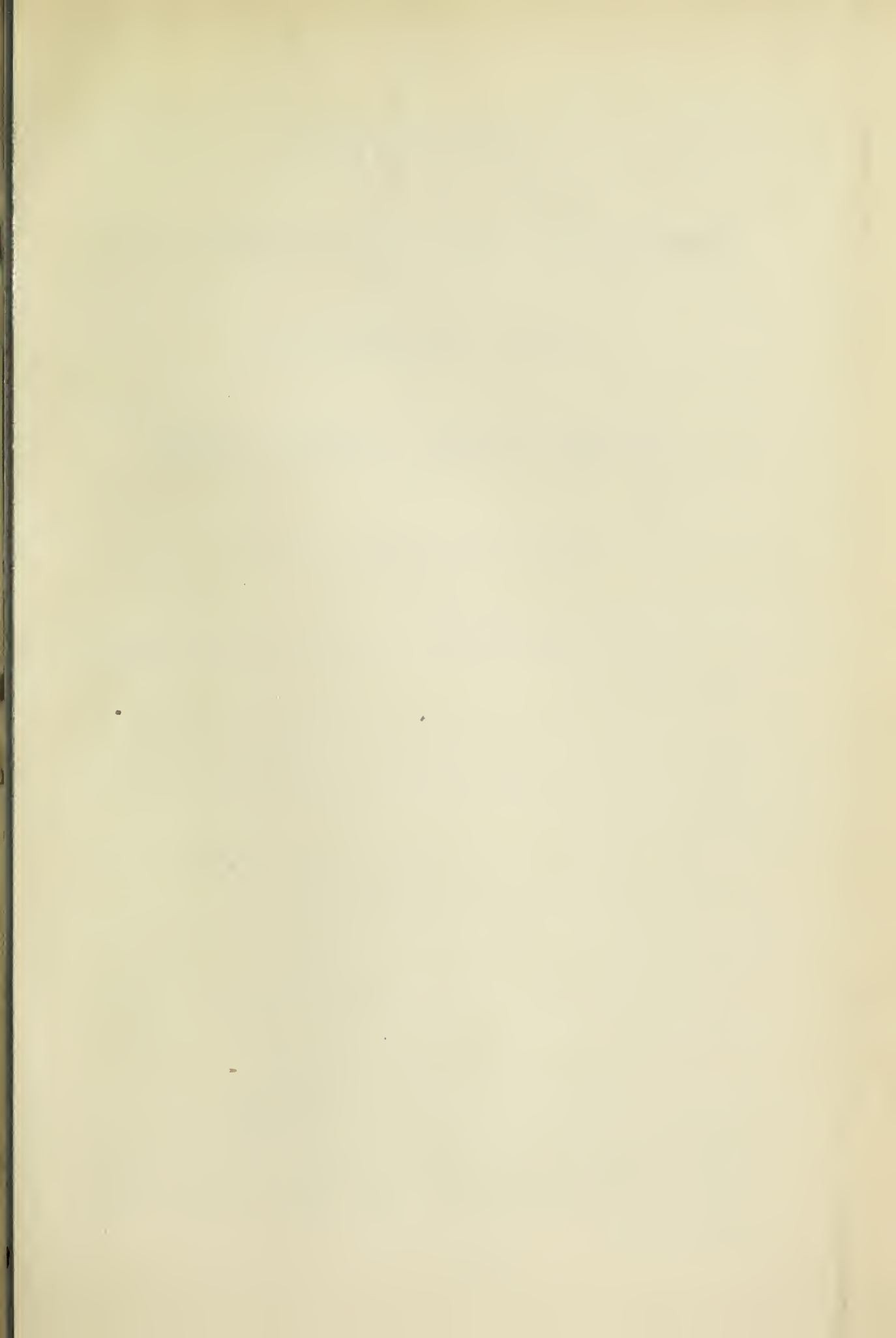
If any such case should come under your care in the future may I ask to be supplied with information at the earliest possible moment, in order that any necessary bacteriological examination may be made under favourable conditions.

Believe me,

Yours faithfully,

W. ARNOLD EVANS,

Medical Officer of Health.



REPORT
OF THE
MEDICAL SUPERINTENDENT
OF THE
CITY HOSPITAL
FOR
INFECTIOUS DISEASES.

—:O:—

TO THE CHAIRMAN AND MEMBERS OF THE SANITARY
COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to lay before you the Report on the Fever Hospital for the year 1896.

During the year 346 patients were admitted to the Hospital. These, together with 45 remaining in the Hospital at the end of the previous year, make a total of 391 patients who have passed through the Wards.

The number of Scarlet Fever patients admitted to the Wards was 248, the percentage mortality being 5·6.

There were 77 cases of Enteric Fever, with a mortality of 19·4 per cent.

There were only 5 cases of Diphtheria admitted, and of these two died.

Sixteen cases other than those scheduled in the Notification Act were admitted, viz., 5 cases of Pneumonia, 3 cases of Measles, 2 cases of Chicken-pox, and 1 case each of Cerebral Abscess, Meningitis, Empyema, Constipation, Phthisis pulmonalis, and Whooping-Cough. Four deaths occurred among these patients.

A new Ironing Machine has been added to the Laundry, resulting in a great saving of labour and increase in efficiency. The lead pipes which connected the cold water to Wards I., II., and III. had become worn, and were replaced by new lead pipes. The corridors and the outside wood-work of the Hospital were repainted and varnished, and all the Wards have been washed down. New copper boilers have been placed in Wards I., II., III., and IV., and have been found very satisfactory.

The Ambulance which has been in daily use since 1887 has become much the worse for wear, and requires renewal.

The health of the Staff has been satisfactory. One of the nurses contracted Scarlet Fever, but made a good recovery.

I have the honour to be, Gentlemen,

Your Obedient Servant,

JAS. TYSON KITCHEN.

APPENDIX.

TABLE A.—General Statement.

Remaining in Hospital 31st December, 1895	45
Admitted during 1896	346
	<u>391</u>
Discharged, relieved, or cured	321
Died	35
Remaining in Hospital 31st December, 1896... ..	35
	<u>391</u>

1005

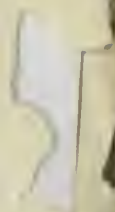


TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS,

Coming to the knowledge of the Medical Officer of Health, during the year 1896, in the Urban Sanitary District of Bradford, classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5 (e)	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																				
	Census 1891. (b)	Estimated to middle of 1896. (c)			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12									
																													FEVERS.						FEVERS.		
	Small-pox.	Scarlatina			Diphtheria	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	TOTALS.	Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	TOTALS.											
North	12783	13519	362	Under 5 ... 5 and upwards	...	2	...	1	8	1	6	4	27	...	2	...	1	8	2	15
South (H)	13124	13879	422	Under 5 ... 5 and upwards	...	2	1	1	2	6	18	...	1	1	2	5	
East	15583	16480	418	Under 5 ... 5 and upwards	...	3	6	1	...	9	31	...	2	8	2	3	2	13		
West	14216	15028	359	Under 5 ... 5 and upwards	1	4	1	12	1	...	26	45	1	2	7	1	10		
Listerhills	18690	19773	418	Under 5 ... 5 and upwards	...	2	...	...	...	1	23	...	...	...	2	58	...	...	9	...	...	...	...	1	17	...	...	...	...	...	...	...	1	26
Great Horton (H) ..	14768	15623	404	Under 5 ... 5 and upwards	...	13	1	3	...	8	1	...	2	...	13	18	58	5	19	...	...	...	...	3	...	...	...	...	...	...	...	...	5	22
Little Horton	15306	16185	461	Under 5 ... 5 and upwards	...	9	2	2	...	2	...	1	...	3	19	16	41	8	1	...	...	...	...	1	...	...	...	...	...	...	...	...	10	5
East Bowling	16068	16988	473	Under 5 ... 5 and upwards	...	12	2	...	...	12	...	...	1	...	17	15	54	11	17	1	...	...	...	9	...	...	...	...	...	...	...	...	11	27
West Bowling	17250	18244	548	Under 5 ... 5 and upwards	...	6	1	...	...	2	...	...	5	...	7	9	48	4	11	1	...	...	...	5	...	...	...	...	...	...	...	...	5	16
Exchange	4846	5126	113	Under 5 ... 5 and upwards	...	2	...	...	...	5	...	...	1	...	6	14	...	2	...	...	...	...	5	...	...	...	...	...	...	...	...	...	7	...
Bradford Moor	17520	18528	532	Under 5 ... 5 and upwards	...	10	2	2	...	7	...	...	...	...	15	14	54	7	23	...	...	...	4	...	...	...	...	...	...	...	...	...	7	27
Manningham	22469	23762	597	Under 5 ... 5 and upwards	...	17	1	...	...	15	...	...	2	...	20	18	83	9	31	...	...	...	8	...	...	...	...	...	...	...	...	...	9	39
Bolton	8425	8910	205	Under 5 ... 5 and upwards	...	18	...	2	...	9	...	...	...	...	3	20	38	10	15	1	...	...	...	3	...	...	...	...	...	...	...	10	19	
Heaton	16108	17036	375	Under 5 ... 5 and upwards	...	18	...	...	...	11	...	...	2	...	11	21	70	9	34	...	...	...	4	...	...	...	...	...	...	...	...	9	38	
Allerton	9199	9728	258	Under 5 ... 5 and upwards	...	9	...	...	...	5	...	...	...	...	1	10	30	4	3	...	...	...	2	...	...	...	...	...	...	...	...	4	5	
BOROUGH TOTALS ...	216361	228809	5945	Under 5 ... 5 and upwards	1	125	10	10	...	6	...	...	18	...	13	164	669	73	184	2	...	...	3	...	...	...	...	...	...	...	...	78	274	

(H) Indicates Locality of Hospitals for Infectious Diseases.

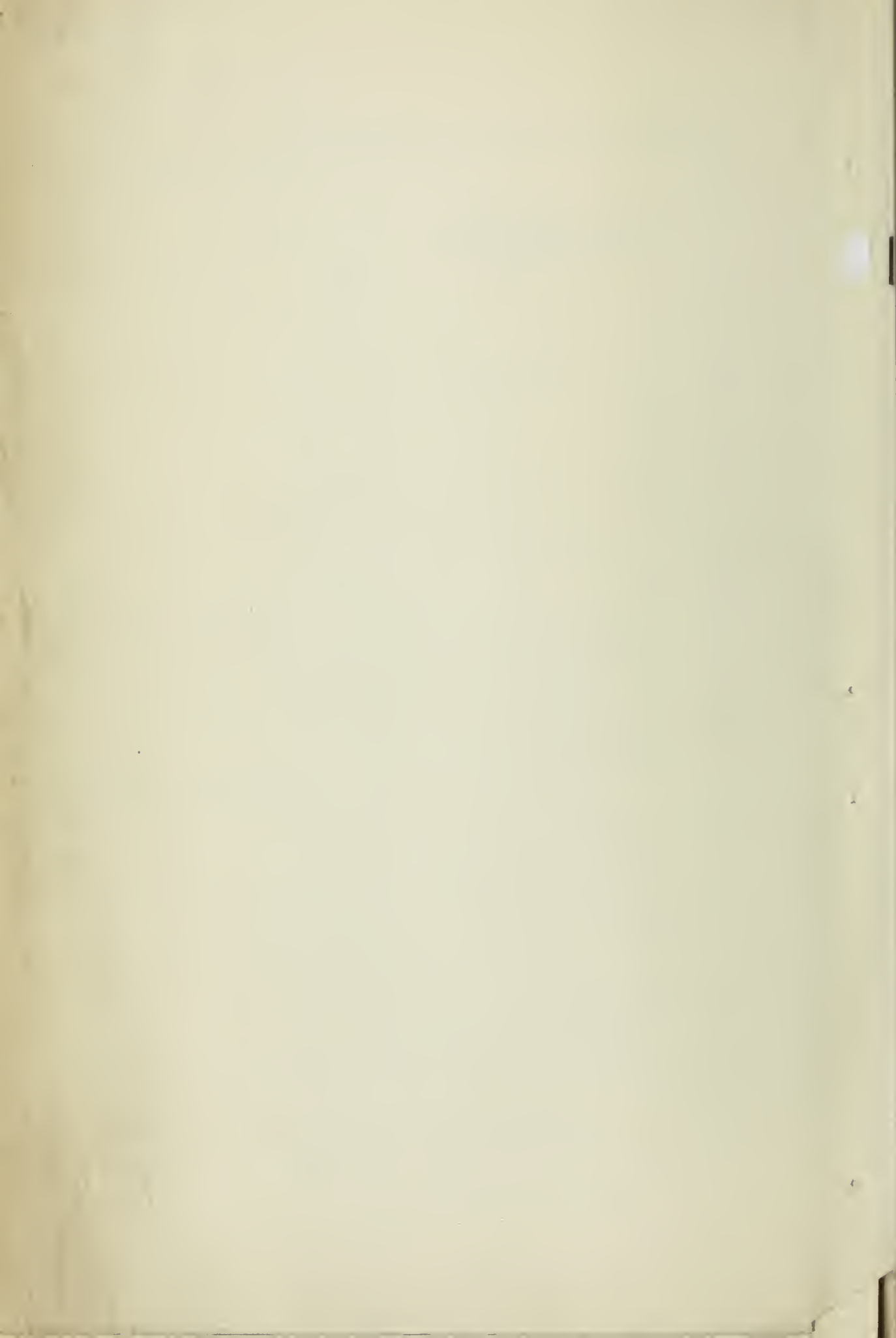


TABLE B.—SCARLET FEVER.

Showing Admissions, Deaths, and Percentage Mortality for the year 1896.

Age.	MALES.		FEMALES.		TOTAL.		
	No. Admitted.	No. Died.	No. Admitted.	No. Died.	No. Admitted.	No. Died.	Death Rate.
Under 1	1	...	...	...	1	...	...
1—2	2	...	2	1	4	1	25.0
2—3	6	...	7	1	13	1	7.6
3—4	7	1	15	3	22	4	18.1
4—5	14	1	13	...	27	1	3.7
Total under 5	30	2	37	5	67	7	10.4
5—10	54	1	69	4	123	5	4.0
10—15	22	...	16	...	38	...	...
15—20	5	2	4	...	9	2	22.2
20—25	2	...	4	...	6	...	...
25—30	1	...	2	...	3	...	...
30—35	1	...	1	...	2	...	..
35—40	...	...	...	...	...	...	...
40—50	...	...	...	...	...	...	...
TOTAL ...	115	5	133	9	248	14	5.6

TABLE C.—ENTERIC FEVER.

Showing Admissions, Deaths, and Percentage Mortality for the
Year 1896.

Age.	MALES.		FEMALES.		TOTAL		
	No. Admitted.	No. Died.	No. Admitted.	No. Died.	No. Admitted.	No. Died.	Death Rate.
Under 5	2	...	1	1	3	1	33.3
5—10	5	1	13	..	15	1	6.6
10—15	6	1	6	1	12	2	16.6
15—20	12	2	6	1	18	3	16.6
20—25	9	3	1	...	10	3	30.0
25—30	7	3	2	1	9	4	44.4
30—35	1	...	...	...	1	...	...
35—40	3	...	..	...	3	...	...
40—50	4	1	..	...	4	1	25.0
50—60	...	...	2	..	2	...	...
TOTAL	49	11	28	4	77	15	19.4

TABLE D.

Showing Number of Cases admitted during each month of 1896.

1896.	Scarlet Fever.			Enteric Fever.			Other Diseases.			Total Admissions.		
Months.	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
January... ..	16	8	24	...	3	3	...	4	4	16	15	31
February ...	6	7	13	4	5	9	2	1	3	12	13	25
March	5	8	13	2	...	2	2	...	2	9	8	17
April	7	4	11	...	3	3	2	...	2	9	7	16
May	10	8	18	...	1	1	1	...	1	11	9	20
June	17	16	33	1	1	2	1	...	1	19	17	36
July	15	22	37	2	1	3	1	1	2	18	24	42
August	12	18	30	7	1	8	1	1	2	20	20	40
September ...	13	17	30	4	2	6	1	...	1	18	19	37
October... ..	6	8	14	18	5	23	...	...	...	24	13	37
November ...	6	12	18	7	4	11	1	1	2	14	17	31
December ...	2	5	7	4	2	6	1	...	1	7	7	14
TOTAL ...	115	133	248	49	28	77	13	8	21	177	169	346

SUMMARY.

YEAR.	SMALL-POX.			ENTERIC FEVER.			SCARLET FEVER.			OTHER DISEASES.			TOTALS.			FROM 1872 TO 1896.	
	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Aggregate No. of days spent in Hospital.	Average No. of days for each Patient.
1872	63	6	9.5	48	9	18.7	14	...	...	37	6	16.2	162	21	13.01	4,546	28
1873	94	15	16.0	54	16	29.7	19	1	5.2	36	7	18.9	203	29	14.28	6,211	30½
1874	249	48	19.27	51	11	21.56	58	6	10.34	53	12	22.6	412	76	18.44	11,715	28½
1875	20	2	10.0	44	6	13.59	103	19	18.4	37	3	8.1	204	30	13.59	6,275	30½
1876	12	...	...	40	5	12.5	35	9	26.0	26	5	19.2	113	19	18.8	2,876	27¼
1877	19	4	21.05	65	13	20.0	72	9	12.5	27	8	29.6	183	34	18.5	5,579	31½
1878	5	1	20.0	55	13	23.6	148	17	11.5	27	3	11.1	237	34	14.3	9,263	39
1879	8	...	...	24	3	12.5	159	14	8.8	23	4	17.39	214	21	9.8	8,414	39
1880	2	1	50.0	60	8	13.3	248	38	15.3	54	7	12.9	364	54	14.8	13,102	36¼

1882	26	2	9.5	61	7	11.5	317	42	13.2	27	...	...	426	51	11.97	16,073	37 $\frac{3}{4}$
1883	5	3	8.8	88	17	19.3	213	31	14.5	39	5	12.8	366	56	15.32	14,766	40
1884	3	...	...	119	17	14.2	233	17	7.2	23	2	8.6	375	36	9.6	15,949	42 $\frac{1}{2}$
1885	28	2	7.14	89	6	6.74	456	19	4.6	29	4	13.7	362	32	8.8	14,215	39 $\frac{1}{2}$
1886	4	...	...	83	8	9.63	625	29	4.64	14	2	14.3	726	39	5.37	29,305	40 $\frac{1}{2}$
1887	3	...	...	79	7	8.86	830	21	2.27	9	5	55.5	921	33	3.58	38,609	42 $\frac{1}{4}$
1888	16	2	12.5	57	6	10.53	283	12	4.24	11	1	9.9	367	21	5.72	16,479	46
1889	9	1	11.11	90	26	28.89	355	40	11.27	36	6	16.67	490	73	14.90	21,315	43 $\frac{1}{2}$
1890	...	...	...	59	11	18.64	380	22	5.78	43	12	27.90	484	45	9.30	19,940	41 $\frac{1}{4}$
1891	...	...	...	76	15	19.6	780	83	10.6	39	10	25.6	897	108	12.04	39,838	44
1892	25	+	16.6	41	11	26.8	587	27	4.6	32	7	21.8	685	49	7.2	29,191	42 $\frac{1}{2}$
1893	935	100	10.6	11	4	36.3	228	17	7.8	12	1	8.3	1186	122	10.2	34,203	28.8
1894	...	...	...	42	8	19.0	525	30	5.7	16	...	...	583	...	...	...	...
1895	...	...	...	97	20	20.6	250	16	6.4	28	9	32.14	375	45	12.0	17,331	46.21
1896	...	...	...	77	15	19.4	248	14	5.6	21	6	28.5	346	35	10.1	17,368	50.1

