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

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

BOROUGH OF OLDHAM.

REPORT

ON THE

HEALTH OF OLDHAM

FOR THE YEAR 1895,

BY

CHARLES H. TATTERSALL,

Medical Officer of Health for the Borough and Medical Superintendent of the Westhulme Fever Hospital.

Oldham:

W. E. CLEGG, PRINTER, BOOKBINDER, &c., 30, MARKET PLACE, AND PETER STREET.

1896.

COUNTY BOROUGH OF OLDHAM.

Town Hall,

Oldham.

With the Compliments

of

The Medical Officer of Health.

BOROUGH OF OLDHAM.

REPORT

ON THE

HEALTH OF OLDHAM

FOR THE YEAR 1895,

BY

CHARLES H. TATTERSALL,

Medical Officer of Health for the Borough and Medical Superintendent of the Westhulme Fever Hospital.

Oldham:

W. E. CLEGG, PRINTER, BOOKBINDER, &c., 30, MARKET PLACE, AND PETER STREET.

1896.

MEMBERS OF THE SANITARY COMMITTEE, 1895.

Mr. Alderman Waddington, Chairman.
,, ,, Hanson, Vice-Chairman.

The Mayor, Mr. Alderman Whittaker.

Mr. Alderman Brierley,	Mr. Councillor Emmott,
,, ,, Jackson,	,, ,, Hawkins,
,, Councillor J. Andrew,	,, ,, Horrobin,
,, ,, Chadwick,	,, ,, Simister,

Mr. Councillor F. Wild.

BOROUGH OF OLDHAM.

TO THE

Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I have the honour to lay before you my Second Annual Report on the Health of the Borough.

The death rate for the year 1895 was 21·9 per thousand living. This is somewhat heavier than the average for the 33 large towns included in the Registrar General's List, which was 20·7 per thousand living.

The year has been remarkable for the severe winter, lasting nearly to the end of March, for an epidemic of Influenza in the first quarter of the year, the outbreak of another epidemic of Smallpox in the second quarter, and an epidemic of Diarrhœa in the third quarter.

The year has been remarkable for the great efforts which have been made by the Committee to improve the sanitary condition of the town in many ways; a further report on the adoption of the Water Carriage system of removing excreta matter has been issued, and at the time of going to press the Council have definitely adopted the principle, and decided to apply to Parliament for powers to carry out the alteration of the town.

A new Disinfector of a satisfactory character has been erected, together with Baths, and is described shortly in the body of the Report.

A new Hospital for the isolation of patients suffering from Smallpox has been erected on a suitable site where it will cause no danger to the surrounding population.

The Insanitary Dwellings Sub-Committee have devoted a great amount of time to the unpleasant task of inspecting the various properties reported to them, and as will be seen have closed a considerable number of the worst dwellings.

A deputation visited the Hull Congress of the British Institute of Public Health, and on their return issued a report, which I believe was interesting to the Committee.

There is also appended a report on the Oldham Water supply with special reference to its plumbo-solvent action, in connection with which I am deeply indebted to Mr. Wood for his invaluable assistance.

The coming year promises to be as busy as the one just past, and with schemes on hand for two new Destructors, and the alteration and development of Westhulme Hospital, the Committee are doing work which will bring Oldham into the very front rank as a town where sanitary arrangements are very complete and of the most modern type.

I beg to tender my thanks to the Committee for the considerate treatment I have constantly received at their hands, and I wish to take this opportunity of recognising the excellent work done by the staff of Inspectors, and especially the hearty co-operation and sacrifice of time by Mr. Chambers, which has rendered possible the issue of the fortnightly printed report which has, I believe, proved a real convenience to the Committee.

I have the honour to be, Gentlemen,
Your obedient Servant,
CHAS. H. TATTERSALL,
MEDICAL OFFICER OF HEALTH.

INDEX.

ERRATA.

Page 62.—Table G, line 3 : 37 should be 3·7.

„ 66.—Line 9 : 521 should be 421.

PART I.

VITAL STATISTICS.

POPULATION.

The Registrar General's estimate of the population of the Borough in the middle of 1895 was 141,079, and this number is the basis on which the various Birth and Death Rates are calculated. This estimate is made upon the assumption that the Borough continues to grow at the same rate as in the decennial period 1881 to 1891, which is shown by the Census. The population at the Census in 1871 was 82,629, which had increased by 1881 to 111,343, and in 1891 to 131,463. These figures show that the Borough in the decade 1881-1891 had not continued to grow at so fast a rate as was indicated by the increase in the previous decade, and as a matter of fact when the 1891 Census came to be taken it was found that the population had been over estimated by between 7,000 and 8,000.

The same decrease in the rate of growth has, I believe, continued to the present year; and I am consequently of opinion that the estimate of the present population mentioned above, is in excess of the actual population, and this is confirmed by the following table, for which I am indebted to Mr. Foote, the Borough Surveyor, and which shows the number of houses built each year from March, 1871, to March, 1895.

TABLE A.

HOUSES BUILT IN THE BOROUGH.

Year.	No. of Houses Built.
March, 1871, to March, 1872	277
,, 1872 ,, 1873	197
,, 1873 ,, 1874	588
,, 1874 ,, 1875	649
,, 1875 ,, 1876	867
,, 1876 ,, 1877	1181
,, 1877 ,, 1878	1010
,, 1878 ,, 1880	989
,, 1880 ,, 1881	746
,, 1881 ,, 1882	738
,, 1882 ,, 1883	644
,, 1883 ,, 1884	631
,, 1884 ,, 1885	737
,, 1885 ,, 1886	780
,, 1886 ,, 1887	657
,, 1887 ,, 1888	711
,, 1888 ,, 1889	371
,, 1889 ,, 1890	218
,, 1890 ,, 1891	214
,, 1891 ,, 1892	190
,, 1892 ,, 1893	227
,, 1893 ,, 1894	362
,, 1894 ,, 1895	284

This table shows that the average number of houses built in each year of the first decade 1871-1881 was 650, and for the second decade it was 570, while the average since March, 1891, is only 266.

This, allowing the same rate of increase to the middle of 1895, and calculating the same number of persons per house as existed at the 1891 Census, viz., 4·5, would give a present population of **136,543,** or 4,536 fewer than the estimate of the Registrar General.

The result of this over-estimation of the population is that the various Death and Birth rates are really higher than the figures given in this report

The estimated population has been distributed to the various Wards as follows:—

St. Mary's	...	...	11,207
St. Peter's	...	...	12,750
Werneth	...	...	12,836
Westwood	...	...	12,443
St. Paul's	...	...	11,034
Coldhurst	...	...	11,314
Hartford	...	...	13,350
Hollinwood	...	...	8,360
Clarksfield	...	...	13,145
Mumps	...	...	9,642
St. James's	...	...	11,125
Waterhead	...	...	13,873

The density of the population varies greatly in the different Wards, and is shown in detail in Table No. 1. It ranges from 99·2 persons to an acre in St. Mary's Ward, to 10·9 persons to the acre in St. James's Ward.

Sex and Age.—In Table No. 2 particulars are given of the estimated population of each sex in various groups of ages. The total population of 141,079 is made up of 67,298 males, and 73,781 females. There are 15,753 persons living under 5 years of age, 31,497 from 5 to 15, years, 28,481 from 15 to 25, 61,239 from 25 to 65, and 4,109 over 65 years of age. The natural increase of the population during the year, that is the excess of births over deaths, is only 781, which compares unfavourably with 1211 for last year, and 1035 for 1893. The total natural increase of the population since the Census is 4,649.

BIRTHS.

During the year 1895 3,873 births have been registered in the Borough, which is an increase of 105 on last year, but is 22 less than 1893.

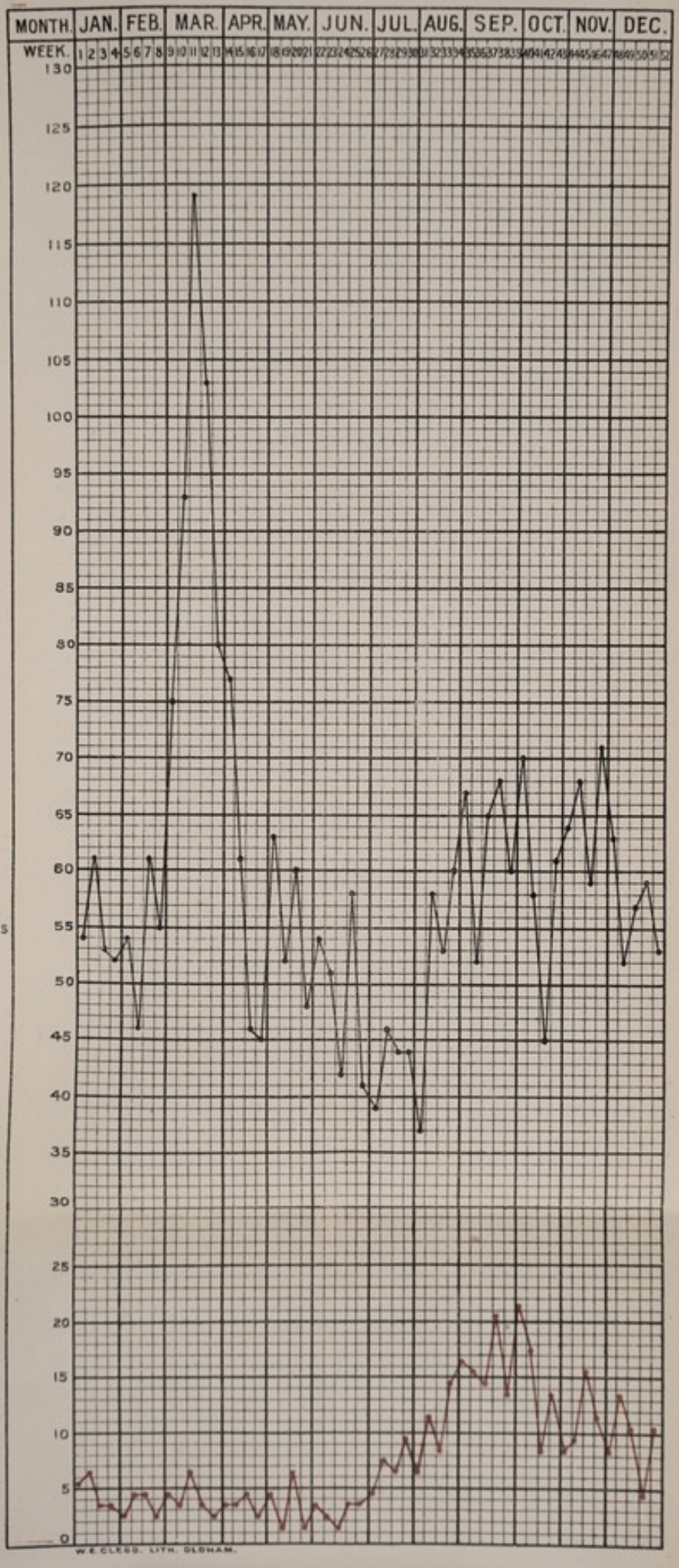
Of the total births 1,940 were males and 1,933 females, equal to a **Birth Rate** of 27·4 per thousand of the estimated population, against 27·1 for the previous year, and 29·3 the average rate for the preceding five years.

The birth rate in the 33 large towns averaged 31·3 per thousand living, against 27·4 for Oldham.

The continuous decline in the birth rate, upon which I commented last year, appears to be temporarily arrested, that is to say, the birth rate for the present year is a shade higher than last year; but the difference is only a trifling one, and it will be very interesting to see whether the gradual approximation of the birth rate to the death rate shown in Table No. 6 will continue.

There were 144 births registered as being illegitimate, or 3·7 per cent. of the total number of births. Of these 34 occurred in the first quarter, 37 in the second, 49 in the third, and 24 in the last quarter.

BOROUGH OF OLDHAM.



AL DEATHS 1895.

YMOTIC DEATHS. 1895.

DEATHS.

The total deaths registered from all causes in the Borough during 1895 numbered 3,092, made up of 1,641 males and 1,451 females. This total includes 22 deaths (16 males and 6 females) which occurred at the Smallpox Hospitals, and were registered in other districts. This gives a **Death Rate** of **21·9** per thousand living.

This is a marked increase on the rate for the previous year, which was 18·5 ; but it must not be forgotten that 1894 was universally the healthiest year of which there is any record. Zymotic disease of various kinds has been with us throughout the year, Influenza paying the town another disastrous visit in the early part of the year, and later on Smallpox, Measles, Diarrhœa, Scarlet Fever, and Whooping Cough were all epidemic in the Borough. The death rate, however, remains below the average for the previous five years, which is 22·2 per thousand living.

The chart attached shows the number of deaths registered each week, and the most noiceable point is the sudden rise in the first week in March, extending to 119 deaths registered in the third week in March, and lasting to the second week in April.

This rise in the curve is exactly co-terminous with the epidemic of Influenza, and is due to the deaths directly from that disease, and indirectly from it but registered as Bronchitis and Pneumonia.

SEX.

In Table No. 2 the deaths and death rates of the two sexes are separated in detail, and it will be noticed that, as usual, the death rate among females is much lower than among males. During 1895 1,641 deaths of males were

registered, which, on an estimated population of 62,862, gives a death rate for the year of 24·4; whereas 1,451 deaths of females were registered, giving a death rate, on an estimated population of 73,781, of 19·7. This shows a difference in favour of the females of 4·7 per thousand living.

Again, on taking age into consideration, the advantage to the female is seen at all periods, with the exception of ages 5 to 15, at which period the death rate for females is 5 per thousand living against 4·3 for males. The greatest advantage appears to be in childhood and middle life, the rate for females under 5 years of age being 65·2 against 91·4 for males, and between the ages of 25 to 65 the rate for females is 15·2 against 20·6 for males.

DEATHS AT VARIOUS AGES.

The deaths and death rates per thousand living at each age period are shown in Table No. 2, from which it will be seen that mortality falls most heavily on the groups under 5 years of age (77·7 per thousand living), and over 65 years (124·1 per thousand living), and most lightly on the groups 5 to 15 (4·3 per thousand living), and 15 to 25 (4·7 per thousand living). This is what may be generally expected, but it is impossible to avoid feeling what an immense waste of human life is constantly going on in the excessive, and to a great extent preventible, mortality among young children. Comparing the deaths at the various age periods with those of last year, an increase is noticeable at all periods, except that from 15 to 25 years of age, the rate for 1895 being 4·7 per thousand, against 6·2 per thousand for 1894.

The excess is most noticeable at the two extremes of life In 1895 the death rate among children under 5 years of age is 77·7 per thousand, against 63·8 in 1894; and an even greater difference is observable among old people, the rate in 1895 among persons over 65 years of age being 124·1 per thousand, against 88·8 in 1894.

DISTRICT MORTALITY RATES.

The deaths and death rates in the various Wards are set out in detail in Tables Nos. 1, 3, and 4 appended to this report. From all causes the death rates vary from 16·7 per thousand in Werneth Ward to 26·6 in Coldhurst Ward, viz:

Coldhurst Ward.....	26·6	...	87	persons to an acre.
St. Mary's ,, ...	26·5	...	99	,,
Waterhead ,, ...	23·9	..	16	,,
St. Paul's ,, ...	23·0	...	24	,,
Hartford ,, ...	22·5	...	64	,,
Mumps ,, ...	22·3	...	77	,,
St. James's ,, ...	21·8	...	10	,,
St. Peter's ,, ...	21·1	...	47	,,
Westwood ,, ...	20·8	...	44	,,
Hollinwood ,, ...	19·8	...	19	,,
Clarksfield ,, ...	18·3	...	21	,,
Werneth ,, ...	16·7	...	49	,,

For the past five years the lowest and highest rates have been:—

1891	...	Clarksfield	22·3	...	Mumps	31·7
1892	...	St. Paul's	16·6	...	St. Mary's	30·9
1893	...	Westwood	18·2	...	St. Mary's	26·4
1894	...	Clarksfield	15·6	...	Coldhurst	23·6
1895	...	Werneth	16·7	...	Coldhurst	26·6

The highest zymotic rate, 4·0 per thousand, was in St. Paul's Ward, which suffered severely from Measles, Diarrhœa, and Diphtheria. There has, however, been no localised epidemic calling for special enquiry. Clarksfield Ward has the lowest zymotic rate, which was 1·7 per thousand living.

Coldhurst Ward again suffered most severely from Phthisis, the rate, 3·1 per thousand, being much heavier than in the other wards; while St. Mary's again suffered most from Bronchitis and Pneumonia, the rate being 6·2 per thousand living. It is worth notice that, as shown above, these two wards have the greatest density of population, Coldhurst having 87 and St. Mary's 99 persons to the acre.

St. Mary's also suffered most from infantile mortality, there being 254 deaths to each 1000 births; St. Paul's and Coldhurst running close with 253 and 247 deaths per 1000 births respectively.

INFANT MORTALITY.

The deaths of children under 1 year of age numbered 737, being at the rate of 190 per thousand births. This is 28 per 1000 more than last year, and 12 above the 5 years' average for the years 1887 to 1891. A more detailed comparison can be readily made from Table No. 6, from which it will be seen that, with the exception of 1891, in which year the rate was 193 per thousand births, the rate for 1895 is the heaviest recorded since 1877. One-half of the excess over last year is accounted for by the increase in the deaths from Diarrhœa, which was largely due to the hot weather in the autumn, and the remainder is spread over various

causes, there being an increase in the deaths from Zymotic disease, Premature birth and Marasmus, while a slight diminution, has taken place in deaths from Tubercular diseases, Convulsions, and acute Lung diseases.

TABLE B.

Deaths under 1 Year from Various Causes.

Ages	Premature Births	Congenital Malformation	Marasmus, Inanition, and Debility	Diarrhœa	Other Zymotics	Convulsions	Dentition	Tubercular Diseases	Pneumonia and Bronchitis	Other Causes	Totals
Under 1 mon.	71	13	44	5	...	26	...	1	9	38	207
1-2 months	4	...	16	1	...	7	...	1	9	19	57
2-3 ,,	2	...	10	7	2	5	...	2	8	17	53
3-4 ,,	2	...	9	8	...	11	...	2	13	14	59
4-5 ,,	...	...	6	16	5	10	...	5	18	11	71
5-6 ,,	...	1	...	6	6	4	...	2	9	8	36
6-7 ,,	...	...	1	6	4	4	...	4	9	8	36
7-8 ,,	...	...	1	5	6	3	1	1	14	11	42
8-9 ,,	...	...	...	7	9	7	...	...	14	7	44
9-10 ,,	...	...	2	7	11	...	...	...	9	13	42
10-11 ,,	...	...	1	8	6	1	1	1	11	6	35
11-12 ,,	...	...	2	6	12	6	2	1	18	5	52
Totals ...	79	14	92	82	61	84	4	20	141	157	734

The infant mortality is generally considered one of the most important indications of the sanitary condition of a town, and it is most unsatisfactory to note that in Oldham there appears to be a tendency to retrogression in this respect. In the quinquennial period 1877 to 1881 the average deaths under 1 year of age per 1000 births was 165; in the next 5 years (1882 to 1886) the average increased to 173; then from 1887 to 1891 there was a further increase of 178, while for the five years just passed the average has again increased to 181 per 1000 births.

It is exceedingly difficult to account for this steady increase in infantile mortality, because during the whole time the birth rate has been steadily falling, and there are consequently relatively fewer children to care for, and the smaller number might reasonably be expected to receive more attention. Then the death rate from zymotic disease, which has a considerable bearing on this question, has also been considerably reduced. Again, work and wages among the industrial classes have distinctly improved, and there is no lack of the necessities, and even the comforts of life among the population, add to these circumstances the fact that the younger generation of mothers have received a better education, and are presumably more intelligent than their predecessors, and the problem has become an exceeding complex and difficult one.

With a view to improving matters in this respect it is of the utmost importance to consider the various methods of feeding children generally adopted. I am afraid that the tendency to feed infants in some other way than the one provided by nature, viz., with the mother's milk, is becoming stronger, and I am inclined to think this is not due to any marked increase in the industrial occupation of married women, but to the desire for freedom

from the very exacting ties of nursing an infant over a period of 12 months on the part of the mothers. The effect of artificial feeding is well seen in a year like 1895 when, owing to climatic and other conditions, infantile diarrhœa became epidemic. In 1894, 56 per cent. of the infants dying were fed from the breast, the deaths from diarrhœa forming 3 per cent. of the whole, whereas in 1895, when the deaths from diarrhœa form 11 per cent. of the whole, the proportion fed from the breast dropped to 46 per cent.

TABLE C.

DEATHS UNDER ONE YEAR OF AGE.

Nature of Diseases.	How Fed.			Cotton Workers.	Charwoman or Domestic Servant.	Other Occupation.	No. where child was nursed at home by mother.
	Breast.	Bottle.	Artificial food.				
Zymotic Diseases ...	34	24	3	10	5	...	46
Diarrhœa	28	48	6	15	6	4	57
Convulsions	40	36	8	16	5	4	59
Congential Mal. formation	6	2	3	3	...	4	7
Inanition, Debility, or Marasmus ...	36	39	6	16	2	3	71
Premature Birth	30	15	11	13	3	6	57
Tubercular Diseases	6	10	4	4	...	...	16
Bronchitis and Pneumonia	63	64	13	27	6	6	102
All other Diseases ...	70	60	13	36	5	9	107
TOTALS	313	298	67	140	32	36	522*

* The want of correspondence in the totals is due to the fact that some children died before being fed in any way.

From Table C it will be noticed that 54 per cent. of the infants who died were fed either with the bottle or with artificial foods, and although it is not at all probable that half our infants are now reared in this manner, it is still quite evident that a very great number are so reared. It is consequently of the greatest importance that the best manner of rearing infants when deprived of the mother's milk, should be widely known, so that I need make no apology for introducing a short account of it here. As a golden rule no other food than milk should be given till the age of seven months, and this is best given mixed with barley water, &c., in the following proportions;—

*During the first month :—

Barley water five parts, and cow's milk six parts, sweeten with sugar of milk.

During the second month :—

Cow's milk	9 parts,
Barley water	6 parts.
Water	3 ,,
Cream	2 ,,

During the third month :—

Cow's milk	12 parts.
Barley water	6 ,,
Water	6 ,,
Cream	3 ,,

During the fourth month :—

Cow's milk	8 parts.
Barley water	3 ,,
Water	4 ,,
Cream	2 ,,

and from this point increase the proportion of cow's milk and cream a little each month. In each instance sweeten with *sugar of milk*. The barley water to be used should be

* Adapted from Dr. Angel Money.

prepared by boiling an ounce of barley in a pint of water, slowly, until the quantity is reduced to three-fourths of a pint, then it is strained and set aside to cool

It should never be forgotten that the germs of many diseases multiply very rapidly when introduced into cow's milk, and that at each stage of its conveyance from the cow to the consumer it is liable to more or less contamination, even when the milk dealer takes great care. It is therefore essential that *all cow's milk should be boiled before use*, and the most scrupulous care should be taken to keep all infants' feeding utensils absolutely clean, using *boiling* water.

Whenever a child fed on a diet similar to the one above described does no thrive, or suffers much from digestive troubles, medical advice should be obtained.

In Table C particulars are given respecting the occupations of the mothers, and from this it will be seen that 70 per cent. of the infants dying were nursed at home by their mothers, and that 30 per cent. were the children of women whose occupation took them away from home through the day.

Unfortunately, as I pointed out in my last report, there is no satisfactory means of ascertaining the actual death rates in the two classes, as it would be first necessary to obtain the number of married women at the child bearing periods of life who go out to work. This information is not contained in the Census Returns, and could only be procured by taking a special Census of the town. There can be little doubt, however, that a great many more than 70 per cent. of the children born are nursed at home by their mothers; and that in fact the death rate among them is less than among those who have to be left through the day to the care of other persons.

From Table B it will be seen that the greatest proportion of deaths among infants occur in the first few months of life. In fact, in the first month, 28 per cent., or nearly one-third of the deaths occur, this includes all those prematurely born, and those whose hold of life is from the first exceedingly feeble; 43 per cent. of the deaths occur in the first three months of life, and 66 per cent., or two-thirds, in the first six months.

The main lines by which improvement in the infant mortality may be effected are :—

(1) Improved methods of feeding those infants who are not fed from the breast, especially the boiling of all milk.

(2) Greater care in avoiding exposure to cold and damp, including the provision of woollen garments with long sleeves.

(3) By the general improvement of their sanitary surroundings.

In Table D the particulars are given of the infantile mortality rates in the 33 large towns for 1895, and for the 10 years, 1885-1894. From this it will be seen that while Oldham slightly exceeds the average, it has the lowest mortality among the eight Lancashire towns.

TABLE D.

INFANTILE MORTALITY IN THE 33 LARGE TOWNS PER 1000 BIRTHS.

	1895.	Ten Years, 1885-1894.
Average 33 large towns	**182**	**164**
London	166	153
West Ham	168	152
Croydon	134	121
Brighton	164	148
Portsmouth	175	145
Plymouth	178	165
Bristol	143	145
Cardiff	179	163
Swansea	178	156
Wolverhampton	218	175
Birmingham	183	171
Norwich	190	170
Leicester	203	201
Nottingham	190	168
Derby	161	147
Birkenhead	174	160
Liverpool	210	186
Bolton	212	174
Manchester	203	182
Salford	281	189
OLDHAM	**190**	**175**
Burnley	242	210
Blackburn	236	197
Preston	248	229
Huddersfield	158	163
Halifax	158	159
Bradford	203	167
Leeds	191	174
Sheffield	197	175
Hull	205	163
Sunderland	189	164
Gateshead	186	161
Newcastle	186	164

ILLEGITIMACY AND INFANT MORTALITY.

There were 144 illegitimate births registered during the year, and 47 deaths of illegitimate children under one year were registered.

This shows that the illegitimate infant has little more than one-half the chance of surviving the first year of life than those born in wedlock. The death rate per 1000 births among the illegitimate infants being 326, against 190 among all classes of infants.

CLASSIFICATION OF CAUSES OF DEATH.

In Table No. 11, appended to this report, there will be found a detailed classification of the deaths registered during the year 1895, into their various causes at various groups of ages.

These deaths may be summarised as follows:—

Zymotic diseases...844	deaths, or	27	per cent.	of the total.
Constitutional ,, ...148	,,	4	,,	,,
Developmental,, ...201	,,	6	,,	,,
Local 1572	,,	53	,,	,,
Other 260	,,	8	,,	,,
And from violence...67	,,	2	,,	,,

The proportionate distribution of deaths into these classes is almost identical with that for 1894.

ZYMOTIC DISEASES.

Zymotic disease of various kinds has been prevalent throughout the year, and particulars respecting them will be found set out at length in Part II of this report.

The deaths from the seven principal zymotic diseases numbered 387 in all, giving a zymotic death rate of 2·7 per thousand of the population. This is higher than the rate for any year since 1889, when the rate was 3·3 per thousand; but it still remains below the average for the five years, 1887 to 1891, which was 2·9 per thousand.

The deaths from the various diseases were as follows :—

Smallpox	23
Measles	97
Scarlet Fever	16
Diphtheria	25
Whooping Cough	57
Enteric or Typhoid Fever.	26
and Diarrhœa...	143

INFLUENZA.

The district suffered in the early part of the year from an epidemic of influenza, which fortunately was not of long duration, lasting for about eight weeks, viz., from the latter part of February to the middle of April.

There were 77 deaths registered from this cause, against 29 in 1894, 44 in 1893, 41 in 1892, 157 in 1891, and 28 in 1890. As is usually found, the disease affected most severely persons over 45 years of age.

PHTHISIS.

There were 245 deaths from this cause, being 7·9 per cent. of the total deaths, and giving a death rate of 1·7 per thousand of the population.

In 1894 the deaths from Phthisis formed 10·8 per cent. of the total deaths, and the death rate was 1·9 per thousand of the population, which is also the average for the previous five years. In fact, the rate for 1895 is the lowest recorded

for the borough, and it is very satisfactory to find improvement in this direction, which is probably due to the diffusion of the knowledge of its infectious character, and the disinfection of all houses in which deaths have occurred, which is carried out free of cost by the Department.

It is, however, important that there should be no relaxation of the efforts that have been made in the past to bring home to the mass of the population thə preventible charater of this dread dsease.

ACUTE LUNG DISEASES.

From Bronchitis, Pneumonia, and Pleurisy 695 deaths were registered, against 536 for 1894, 624 for 1893, and 683 for 1892. This increase is largely due to the epidemic of Influenza, which lasted for a period of eight weeks, ending in the middle of April. The continuous severe weather in the early part of the year is also probably responsible for a portion of the increase, the mean temperature for each of the first 10 weeks being below freezing point. From Bronchitis alone there were 367 deaths, giving a death rate of 2·6 per thousand, against 2·0 for last year; while from Pneumonia 326 deaths were registered, giving a death rate of 2·3 per thousand, against 1·8 for 1894, and 2·7 the corrected average for the years 1887 to 1891.

INQUESTS.

There have been 189 inquests held during the year, particulars of which will be found in Table No. 9, for which I am indebted to the Coroner.

From this Table it will be seen that there was one verdict of manslaughter, 63 of accidental death and 103 of death from natural causes, against 2 of murder, 3 of manslaughter, 50 of accidental death, and 88 of death from natural causes in 1894.

TABLE E.

Recorded and Corrected Death-rates per 1000 Persons living in 33 Great Towns in 1895.

Towns in the order of their Corrected Death-rates.	Standard Death-rate.*	Factor for Correction for Sex and Age Distribution.†	Recorded Death-rate 1895.	Corrected Death-rate 1895. ‡	Comparative Mortality Figure 1895. §
Cols.	1.	2.	3.	4.	5.
England and Wales ...	19·15	1·0000	18·71	18·71	1000
England and Wales, less the 33 towns ...	19·45	0·9845	17·68	17·41	931
33 Towns	17·71	1·0813	20·65	22·33	1193
Croydon	18·37	1·0424	14·47	15·08	806
Portsmouth	18·73	1·0224	17·83	18·23	974
Derby	17·36	1·1031	16·70	18·42	985
Norwich	19·99	0·9579	19·34	18·53	990
Leicester	17·64	1·0855	17·24	18·71	1000
Bristol	18·33	1·0447	18·06	18·87	1009
Brighton	18·94	1·0110	18·88	19·09	1020
West Ham	17·75	1·0788	17·87	19·28	1030
Plymouth	19·70	0·9720	20·11	19·55	1045
Huddersfield	16·47	1·1627	16·88	19·63	1049
Swansea	17·53	1·0924	18·27	19·96	1067
Cardiff	17·16	1·1159	18·21	20·32	1086
Nottingham	17·81	1·0752	19·02	20·45	1093
Gateshead	17·83	1·0740	19·58	21·03	1124
London	17·97	1·0656	19·85	21·15	1130
Birkenhead	17·42	1·0993	19·53	21·47	1148
Halifax	17·20	1·1133	19·29	21·48	1148
Hull	18·23	1·0504	20·84	21·89	1170
Newcastle	17·58	1·0892	20·48	22·31	1192
Birmingham	17·33	1·1050	20·28	22·41	1198
Leeds	17·28	1·1082	20·49	22·71	1214
Bradford	16·73	1·1446	19·85	22·72	1214
Sheffield	17·22	1·1120	20·46	22·75	1216
Sunderland	18·25	1·0493	21·79	22·86	1222
OLDHAM	**16·72**	**1·1453**	**21·97**	**25·16**	**1345**
Wolverhampton	18·30	1·0464	24·38	25·51	1363
Preston	17·42	1·0993	23·89	26·26	1404
Burnley	16·67	1·1487	23·38	26·86	1436
Bolton	16·90	1·1331	23·96	27·15	1451
Blackburn	17·05	1·1231	24·30	27·29	1459
Manchester	16·90	1·1331	25·23	28·59	1528
Salford	17·03	1·1244	25·65	28·84	1541
Liverpool	17·26	1·1094	28·79	31·94	1707

* The Standard Death-rate signifies the death-rate at all ages calculated on the hypothesis that the rates at each of 12 age-periods in each town were the same as in England and Wales during the ten years 1881-90, the Death-rate at all ages in England and Wales during that period having been 19·15 per 1,000.

† The Factor for Correction is the figure by which the Recorded Death-rate should be multiplied in order to correct for variations of sex and age distribution.

‡ The Corrected Death-rate is the Recorded Death-rate multiplied by the Factor for Correction.

§ The Comparative Mortality Figure represents the Corrected Death-rate in each town compared with the Recorded Death-rate at all ages in England and Wales in 1895, taken as 1000.

In Table No. 5, which is reproduced from the Registrar General's Annual Summary for 1895, will be found a comparison of the death rates in Oldham with those of the remainder of the 33 large towns.

The death rate from all causes averaged for the whole of the 33 large towns 20·7 per thousand living, against 21·9 per thousand living in Oldham.

Of the eight Lancashire towns Oldham stood first, the figures being—Oldham 21·9, Burnley 23·4, Preston 23·9, Bolton 24·0, Blackburn 24·3, Manchester 25·2, Salford 25·6, Liverpool 28·8.

From the principal zymotic diseases the death rate in the 33 large towns averaged 2·8 per thousand living, against 2·7 in Oldham. The zymotic rates in the other Lancashire towns were :—Manchester 3·7, Preston 3·7, Burnley 3·8, Liverpool 4·0, Bolton 4·4, Salford 4·9, and Blackburn 5·6.

These recorded death rates, however, are fallacious as an estimate of the comparative mortality, as towns having the largest proportion of either young children or old people, would, all other things being equal, show the highest death rates, and conversely those with the greatest proportion of young adults would show the lowest death rates. Again a similar discrepancy may arise from excess of one sex over the other, the death rates among females being lower than those among males. To enable a fair comparison to be drawn, the Registrar General has issued a table which, placing all towns under the same conditions as to age and sex and distribution of population, enable a fair comparison to be drawn.

This Table which is here reproduced (see Table E) shows that the comparative mortality figure for Oldham in 1895

was 1345, England and Wales being represented by 1000, or, in other words, where 1000 persons would die in England and Wales generally, 1345 would die in Oldham.

METEOROLOGICAL REPORT.

The year 1895 will long be memorable on account of the severe frost which prevailed for the first three months of the year, causing an enormous amount of inconvenience through the freezing up of many of the water mains. For the first ten weeks of the year the mean temperature in the shade for each week never rose above freezing point. The weather was most severe from the 7th to the 11th of February, the actually lowest reading of the thermometer on the grass being 5 degrees Fahrenheit on the evenings of Thursday and Friday, the 7th and 8th of February.

The spring was very changeable, there being a spell of summer heat in the middle of May, followed by cold and wet weather.

The summer was unsettled, with frequent thunderstorms and heavy rains.

Early in autumn the weather became unusually fine and warm, and this lasted through the whole of September.

Fuller details are given below.

January.—The mean pressure of the barometer for the month was 29·87 inches, and the mean temperature 31 degrees Fahrenheit. The minimum temperature recorded on the grass was 9 degrees, and the maximum in the sun was 48 degrees. The temperature recorded by the thermometer 4 feet below the surface, ranged from 43 to 38 degrees. Rain fell on 14 days, the total rainfall for the month amounting to 2·54 inches. Snow fell on several occasions.

February.—The mean barometric pressure was 30·22 inches, and the mean temperature 29 degrees. The minimum temperature recorded on the grass was 5 degrees, and the maximum in the sun 48 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 38 to 36 degrees.

Rain fell on 2 days, the total rainfall for the month amounting to 0·39 inches. Snow was on the ground nearly the whole of the month.

March.—The mean barometric pressure for the month was 29·80 inches, and the mean temperature 40 degrees. The minimum temperature on the grass was 20 degrees, and the maximum in the sun 64 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 36 to 39 degrees.

Rain fell on 18 days, the total rainfall being 3·06 inches.

April.—The mean barometric pressure was 29·97 inches, and the mean temperature 44 degrees. The minimum temperature on the grass was 23 degrees, and the maximum temperature in the sun was 66 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 39 to 44 degrees.

Rain fell on 13 days, the total rainfall amounting to 1·86 inches.

Rough, unsettled weather generally during the month.

May.—The mean barometric pressure was 30·25 inches, and the mean temperature 53 degrees. The minimum temperature recorded on the grass was 28 degrees, and the maximum in the sun 83 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 44 to 50 degrees.

Rain fell on 9 days, the total rainfall amounting to 1·44 inches.

Snow fell on the 17th, and there was a severe thunderstorm on the 24th at noon.

June.—The mean barometric pressure was 30·25 inches, and the mean temperature 56 degrees. The minimum temperature recorded on the grass was 29 degrees, and the maximum in the sun 85 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 50 to 54 degrees.

Rain fell on 7 days, the total rainfall amounting to 2·74 inches. Severe thunderstorm on the 26th, from 5 to 7 in the evening.

July.—The mean barometric pressure was 29·94 inches, and the mean temperature 57 degrees. The minimum temperature recorded on the grass was 40 degrees, and the maximum on the sun 81 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 54 to 56 degrees.

Rain fell on 24 days out of 35, the total rainfall amounting to 7·77 inches. South-westerly winds prevailed; thunderstorm in the evening of 21st; also a severe thunderstorm on the 26th. Rainfall in the 24 hours ending 10 a.m., July 26th, 2·42 inches.

August.—The mean barometric pressure was 29·98 inches, and the mean temperature was 59 degrees. The minimum temperature recorded on the grass was 41 degrees, and the maximum in the sun 83 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 55 to 57 degrees.

Rain fell on 16 days, the total rainfall amounting to 3·86 inches. Winds variable, mainly west.

September.—The mean barometric pressure was 30·22 inches, and the mean temperature 59 degrees. The minimum temperature recorded on the grass was 34 degrees, and the maximum in the sun 88 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 56 to 55 degrees.

Rain fell on 8 days, and the total rainfall amounted to 1·61 inches. Winds variable.

October.—The mean barometric pressure was 29·98 inches, and the mean temperature 45 degrees. The minimum temperature recorded on the grass was 19 degrees, and the maximum in the sun 89 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 55 to 50 degrees.

Rain fell on 16 days, and the total rainfall amounted to 3·63 inches.

November.—The mean barometric pressure was 29·90 inches, and the mean temperature 44 degrees. The minimum temperature recorded on the grass was 25 degrees, and the maximum in the sun 58 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 47 to 45 degrees.

Rain fell on 18 days, and the total rainfall amounted to 2·55 inches

A rough and somewhat unsettled month.

December.—The mean barometric pressure was 29·84 inches, and the mean temperature 37 degrees. The minimum temperature on the grass was 20 degrees, and the maximum in the sun 52 degrees.

The temperature recorded by the thermometer 4 feet below the surface, ranged from 45 to 41 degrees.

Rain fell on 15 days, and the total rainfall amounted to 3·26 inches.

Westerly winds prevailed for the first fortnight; easterly winds during the last fortnight. The last week of the year was remarkable for heavy easterly gales.

VITAL STATISTICS, 1895.

SUMMARY.

Population estimated by the Registrar General to the middle of the year 1895			141,079
Births registered in the 52 weeks ending December 28th, 1895... ...	Males ... 1940		3,873
	Females ... 1933		
Deaths registered in the 52 weeks ending Decem. 28th, 1895... ...	Males ... 1641		3,092
	Females ... 1451		
including			
Deaths registered outside the Municipal Borough of persons belonging thereto, Males ...16			22
	Females ... 6		
Deaths from the Seven principal Zymotic Diseases			387
Deaths under 1 per thousand births			190
Annual Rate of Births per thousand living population			27·4

Annual Rate of Mortality from all causes per thousand living population ... ... 21·9

Annual Rate of Mortality per thousand living population from the Seven principal Zymotic Diseases ... ... 2·7

Of the 3,092 deaths registered during the year 1895, 1225, or 39·6 per cent. were those of children under 5 years of age.

PRINCIPAL CAUSES OF DEATH.

Bronchitis	367	Debility	123
Phthisis...	245	Old Age	101
Pneumonia	326	Cancer	94
Heart Disease... ...	205	Inflammation of Brain	72
Apoplexy	154	Whooping Cough ...	57
Convulsions	106	Measles	97
Diarrhœa...	143	Influenza	77

TABLE No. 1. Showing Population, Births, and Birth-Rates.

WARD.	Population.	Area in Acres.	Density (Persons to an Acre).	BIRTHS.			Birth Rate per 1,000 Population.	DEATHS.			Death Rate per 1,000 Population.
				Males.	Females.	Total.		Males.	Females.	Total.	
St. Mary's	11,207	113	99·2	181	154	335	29·9	162	135	297	26·5
St. Peter's	12,750	271	47·0	139	148	287	22·5	137	132	269	21·1
Werneth	12,836	262	49·0	157	141	298	23·2	108	107	215	16·7
Westwood	12,443	280	44·4	172	201	373	30·0	135	124	259	20·8
St. Paul's	11,034	457	24·1	144	141	285	25·8	136	118	254	23·0
Coldhurst	11,314	130	87·0	164	168	332	29·3	163	138	301	26·6
Hartford	13,350	207	64·5	187	179	366	27·4	153	147	300	22·5
Hollinwood.....	8,360	420	19·9	158	156	314	37·5	97	69	166	19·8
Clarksfield	13,145	623	21·1	183	182	365	27·8	134	107	241	18·3
Mumps	9,642	125	77·1	120	104	224	23·2	122	93	215	22·3
St. James'	11,125	1,015	10·9	153	155	308	27·7	131	112	243	21·8
Waterhead	13,873	826	16·8	182	204	386	27.8	163	169	332	23·9
Total.....	141,079	4,729	29·8	1,940	1,933	3,873	27·4	1641	1451	3092	21·9

TABLE No. 2.

Estimated Population, also Deaths at all Ages, and at 5 Groups of Ages

Groups of Ages.	Population.		Deaths, 1895.	Death rates per 1000 living Population, 1895.
	Census, 1891	Estimated, 1895.		
All Ages	131,463	141,079	3,092	21·9
Under 5 Years ...	15,466	15,753	1,225	77·7
5 to 15 ,, ...	29,281	31,497	136	4·3
15 to 25 ,, ...	26,406	28,481	134	4·7
25 to 65 ,, ...	56,598	61,239	1,087	17·7
65 Years and upwards.	3,712	4,109	510	124·1
	MALES			
All Ages	62,862	67,298	1641	24·4
Under 5 Years ...	7,507	7,558	691	91·4
5 to 15 ,, ...	14,349	15,447	56	3·6
15 to 25 ,, ...	12,551	13,584	69	5·1
25 to 65 ,, ...	26,890	28,993	597	20·6
65 years and upwards..	1,565	1,716	228	132·9
	FEMALES			
All Ages	68,601	73,781	1451	19·7
Under 5 Years ...	7,959	8,195	534	65·2
5 to 15 ,, ...	14,932	16,050	80	5·0
15 to 25 ,, ...	13,855	14,897	65	4·4
25 to 65 ,, ...	29,708	32,246	490	15·2
65 Years and upwards.	2,147	2,393	282	117·8

TABLE No. 3.

Death Rates per 1,000 population in the various Wards, from various Diseases.

1895.

Ward.	All causes	Seven Principal Zymotic Diseases	Phthisis	Bronchitis	Pneumonia	Deaths under 1 year to 1000 births
St. Mary's	26·5	3·5	1·96	2·76	3·48	254
St. Peter's	21·1	2·6	2·2	2·27	2·0	205
Werneth	16·7	2·5	1·4	1·56	1·1	137
Westwood	20·8	2·9	1·7	2·9	1·7	174
St. Paul's	23·0	4·0	1·26	3·1	2·7	253
Coldhurst	26·6	3·8	3·1	2·4	2·1	247
Hartford	22·5	2·6	1·6	3·1	2·3	191
Hollinwood	19·8	1·9	1·5	2·6	2·1	137
Clarksfield	18·3	1·7	1·06	2·4	2·3	145
Mumps	22·3	2·9	1·66	2·5	3·1	178
St. James's	21·8	2·7	1·3	2·6	2·4	195
Waterhead	23·9	2·0	1·9	2·9	2·4	173

Table of Deaths during the year 1895, in the Urban Sanitary D

Names of Localities.	Mortality from all Causes at subjoined Ages.								M
	At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.
St. Mary's	297	85	47	12	15	93	45	Under 5	...
								5 upwards.	3
St. Peter's	269	59	37	12	15	97	49	Under 5	...
								5 upwards.	...
Werneth.....	215	41	37	14	10	70	43	Under 5	...
								5 upwards	1
Westwood	259	65	44	4	17	89	40	Under 5	1
								5 upwards.	...
St. Paul's	254	72	56	11	9	70	36	Under 5	...
								5 upwards.	1
Coldhurst	301	82	39	9	15	117	39	Under 5	1
								5 upwards	...
Hartford	300	70	53	16	10	103	48	Under 5	...
								5 upwards.	1
Hollinwood	166	43	28	8	4	59	24	Under 5	...
								5 upwards.	...
Clarksfield	241	53	29	13	9	89	48	Under 5	...
								5 upwards.	...
Mumps	215	40	37	9	6	88	35	Under 5	...
								5 upwards	3
St. James'	243	60	38	7	10	84	44	Under 5	...
								5 upwards.	5
Waterhead	332	67	43	21	14	128	59	Under 5	3
								5 upwards	4
Totals	3,092	737	488	136	134	1087	510	Under 5	5
								5 upwards.	18
Workhouse	362	11	9	4	5	217	116	Under 5	...
								5 upwards.	...
Infirmary	60	2	11	5	6	30	6	Under 5	...
								5 upwards.	...
Westhulme Hospital	16	...	6	2	5	3	...	Under 5	...
								5 upwards	...
The subjoined numbers have been taken									
Deaths occurring outside the district among persons belonging thereto.	22	1	4	4	1	12	...	Under 5	5
								5 upwards.	17
Deaths occurring within the district among persons not belonging thereto.	116	1	4	6	6	54	45	Under 5	...
								5 upwards	...

Area and Population of the Dis

Area in Acres: 4,729. Population (Census, 1891): 131,463.

m, classified according to Diseases, Ages, and Localities.

ined Causes, distinguishing Deaths of Children under Five Years of Age.

Croup.	Fevers.		Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Influenza.	Injuries.	All other Diseases.	Total.
	Enteric or Typhoid.	Puerperal.												
	...	...	...	11	5	13	...	1	26	...	1	...	68	132
	4	2	1	...	...	...	...	21	44	18	4	3	65	165
	...	...	...	5	4	15	...	...	15	...	1	1	51	96
	3	...	...	...	...	2	3	28	40	20	8	4	64	173
	...	...	...	13	5	8	...	...	15	...	...	1	34	78
	1	1	...	1	...	2	2	18	19	15	9	2	65	137
	1	...	...	12	3	11	...	1	19	...	1	...	55	109
	3	...	...	...	...	2	...	20	39	16	7	2	61	150
	1	...	...	18	1	12	...	...	31	2	...	1	52	128
	2	...	...	...	...	1	3	14	33	15	4	3	48	126
	...	...	..	18	5	10	...	1	17	...	4	2	57	121
	4	...	...	...	1	1	1	34	35	16	7	3	78	180
	...	...	...	4	5	18	...	...	32	...	1	1	56	123
	1	...	2	...	1	2	1	22	41	16	8	4	77	177
	...	...	...	6	1	5	...	1	18	...	...	1	36	71
	1	1	...	...	...	...	2	12	22	9	2	5	40	95
	...	...	2	1	6	8	...	...	18	...	...	1	42	82
	1	1	1	...	...	3	3	14	45	20	5	3	61	159
	...	...	...	5	6	6	...	1	16	...	...	...	36	77
	...	1	...	...	...	2	1	15	38	18	4	3	52	138
	...	...	1	3	3	11	...	...	21	1	1	3	50	98
	2	...	...	...	...	3	...	15	35	19	3	1	61	145
	...	...	...	...	10	7	...	2	22	...	...	2	60	110
	2	2	1	...	1	1	5	25	54	20	7	3	96	222
	2	...	3	96	54	124	...	7	250	3	9	13	597	1225
	24	8	5	1	3	19	21	238	445	202	68	36	768	1867
	...	...	...	4	1	...	...	...	3	...	...	...	12	20
	...	...	1	1	...	4	...	50	78	39	...	...	169	342
	...	...	...	...	...	...	...	...	1	...	..	4	8	13
	...	...	...	...	...	...	...	...	1	2	...	22	22	47
	...	...	...	...	...	...	...	...	...	...	...	...	...	6
	9	...	...	...	...	...	...	...	...	...	...	...	1	10

in judging of the above records of mortality.

	...	...	...	...	...	...	...	...	...	..	...	...	...	5
	...	...	...	...	...	...	...	...	...	...	...	...	...	17
	..	...	...	1	...	...	...	...	...	...	...	1	3	5
	...	...	1	1	...	1	...	8	23	6	...	8	63	111

sion to which this Return relates.

Rates: General, 21·9 per 1,000 population; Infant, 190 per 1,000 births.

TABLE No. 5.

33 TOWNS.—BIRTH and DEATH-RATES, and ANALYSIS of MORTALITY, in the 52 Weeks of 1895.

In this Table, 0·00 indicates that the deaths were too few to give a rate of 0·005; when *no death* occurred,—is inserted.

Cities and Boroughs.	Annual Rates per 1,000 Persons Living.																			
	Births in 52 Weeks ending 28th Dec., 1895.	Total Deaths. 52 Weeks ending.				Deaths from									Deaths under 1 year to 1000 Births	Annual Death Rate per 1000 living.		Percentage to Total Deaths.		
		31st Dec., 1892.	30th Dec., 1893.	29th Dec., 1894.	28th Dec., 1895.	Principal Zymotic Diseases.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Violence.		Aged 1 to 60 Years.	Aged 60 Years and upw'rds	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.
Cols.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
33 Towns	31·3	20·7	21·6	18·1	20·7	2·84	0·01	0·53	0·18	0·35	0·37	0·20	1·20	0·74	182	11·1	79·4	7·1	19·3	1·5
London	30·5	20·6	21·3	17·8	19·8	2·64	0·01	0·60	0·19	0·53	0·34	0·14	0·83	0·78	166	10·8	76·8	8·6	26·8	0·7
West Ham	34·3	18·6	18·9	16·2	17·9	3·24	0·04	0·91	0·18	0·77	0·23	0·26	0·85	0·53	168	9·5	73·9	4·8	10·1	2·7
Croydon	25·3	15·8	16·3	13·2	14·5	1·32	—	0·17	0·04	0·19	0·24	0·12	0·56	0·51	134	6·6	71·3	9·0	14·5	—
Brighton	25·6	19·2	18·4	16·4	18·9	1·75	—	0·22	0·04	0·15	0·35	0·12	0·87	0·49	164	9·3	74·1	4·4	16·4	1·6
Portsmouth	27·9	18·5	18·2	15·2	17·8	2·13	—	0·22	0·04	0·11	0·36	0·20	1·20	0·59	175	8·5	73·0	6·9	13·8	0·8
Plymouth	28·7	18·8	21·2	18·3	20·1	1·92	—	0·87	0·02	0·11	0·32	0·08	0·52	0·37	178	9·5	71·3	5·8	7·6	0·3
Bristol	28·9	19·5	18·9	17·3	18·1	1·30	—	0·04	0·07	0·15	0·20	0·09	0·75	0·57	143	9·0	80·8	7·9	20·3	1·1
Cardiff	34·3	18·8	19·7	16·2	18·2	2·43	—	0·30	0·05	0·36	0·34	0·10	1·28	0·86	179	9·4	75·0	7·6	12·1	1·0
Swansea	33·4	20·4	19·6	17·0	18·3	1·68	—	0·48	0·05	0·12	0·21	0·21	0·61	0·66	178	9·6	66·7	6·8	7·5	1·1
Wolverhampton..	35·4	21·5	23·3	20·7	24·4	4·23	—	0·48	0·39	0·98	0·62	0·20	1·56	0·65	218	12·4	80·2	5·9	13·5	0·6

Birkenhead	30·7	19·6	20·5	18·1	19·5	2·35	—	0·03	0·15	0·42	0·38	0·39	0·98	0·61	174	10·6	82·6	7·5	11·4	1·1
Liverpool	36·9	24·7	27·3	23·8	28·8	4·01	0·03	0·71	0·29	0·24	0·74	0·37	1·63	1·44	210	17·2	98·7	6·8	21·8	3·0
Bolton	32·9	22·8	24·1	18·8	24·0	4·45	0·01	1·04	0·19	0·13	0·56	0·45	2·07	0·67	212	13·5	89·4	6·6	10·0	0·3
Manchester	33·7	23·8	24·9	20·4	25·2	3·73	0·00	0·97	0·32	0·21	0·48	0·19	1·56	0·92	203	15·0	90·3	7·4	20·1	1·2
Salford	35·9	24·6	24·1	21·0	25·6	4·96	—	1·03	0·47	0·39	0·64	0·42	2·10	0·78	231	14·4	85·3	5·3	15·2	2·3
OLDHAM	**27·4**	**22·0**	**21·0**	**18·6**	**21·9**	**2·79**	**0·16**	**0·70**	**0·11**	**0·18**	**0·38**	**0·18**	**1·08**	**0·53**	**190**	**12·9**	**94·3**	**5·8**	**11·2**	**0·3**
Burnley.....	32·1	20·4	21·9	18·7	23·4	3·88	—	0·25	0·22	0·43	0·54	0·30	2·14	0·53	242	12·4	91·8	3·8	5·3	1·9
Blackburn	30·6	21·7	23·3	17·9	24·3	5·63	—	2·54	0·06	0·07	0·59	0·23	2·14	0·57	236	13·6	87·6	3·6	7·9	2·8
Preston.....	33·4	24·1	26·4	20·8	23·9	3·77	0·01	0·42	0·04	0·07	0·45	0·20	2·58	0·61	248	11·4	89·6	3·0	8·4	3·6
Huddersfield ...	21·7	18·1	17·2	15·8	16·9	1·20	—	0·12	0·19	0·15	0·20	0·06	0·48	0·43	158	9·5	77·2	3·9	7·7	3·3
Halifax.....	23·4	19·5	17·4	16·5	19·3	1·30	—	0·10	0·05	0·15	0·25	0·17	0·58	0·49	158	10·5	88·9	5·5	11·2	2·0
Bradford	26·1	18·0	21·0	17·0	19·9	2·51	—	0·08	0·11	0·09	0·47	0·18	1·58	0·48	203	10·5	87·6	5·8	11·4	1·0
Leeds	31·6	19·8	22·3	17·9	20·5	2·69	—	0·34	0·13	0·16	0·28	0·21	1·57	0·70	191	10·8	84·5	8·1	10·7	0·6
Sheffield	34·9	20·8	22·3	17·8	20·5	3·17	—	0·55	0·10	0·15	0·21	0·28	1·88	0·51	197	10·5	77·0	4·2	12·3	3·1
Hull	34·2	19·6	21·8	17·4	20·8	3·32	—	0·09	0·18	0·17	0·20	0·22	2·46	0·69	205	10·0	77·6	4·6	12·1	4·0
Sunderland	35·1	20·9	22·5	20·8	21·8	3·50	—	0·07	0·08	0·06	0·46	0·96	1·87	0·71	189	11·8	77·3	7·0	12·9	1·2
Gateshead.....	34·6	18·9	19·3	17·7	19·6	2·63	—	0·29	0·15	0·20	0·65	0·16	1·18	0·56	186	10·1	76·2	7·8	6·2	0·8
Newcastle.....	31·2	19·7	21·0	18·3	20·5	2·52	—	0·68	0·11	0·25	0·29	0·23	0·96	0·84	186	11·8	74·9	9·0	15·2	1·1

TABLE No. 6.

Showing the Birth-rates, also Rates of Mortality from all causes, from the seven principal Zymotic Diseases, and from Phthisis, Bronchitis, and Pneumonia, during the years 1877-1895.

Years.	Population	RATES PER 1,000 POPULATION FROM						Deaths under 1 year to 1000 births
		Births	Deaths all causes	7 princip'l Zymotic Diseases	Phthisis	Bronchitis	Pneumonia	
1877	99,557	40·2	24·9	3.0	2·2	3·3	1·6	162
1878	102,573	39·8	26·9	5·7	2·3	3·5	1·5	175
1879	105,679	36·2	22·7	2·8	2·1	3·4	1·8	157
1880	108,880	35·4	24·6	4·3	2·3	3·3	1·7	181
1881	112,176	35·3	22·7	2·3	2·3	3·4	2·0	152
Average 5 y'rs		**37·4**	**24·3**	**3·6**	**2·2**	**3·4**	**1·7**	**165**
1882	114,017	35·3	24·9	2·8	2·3	3·4	2·1	182
1883	115,888	36·0	22·5	1·5	2·3	2·9	1·8	159
1884	117,791	37·4	25·9	3·7	2·6	2·8	2·3	182
1885	119,724	37·5	23·2	2·1	2·4	2·7	2·2	167
1886	121,690	34·7	24·2	3·0	2·3	3·1	1·9	175
Average 5 y'rs		**36·2**	**24·1**	**2·6**	**2·4**	**3·0**	**2·0**	**173**
1887	123,687	33·8	25·8	4·5	2·0	3·2	2·1	187
1888	125,717	33·3	22·3	2·2	1·9	2·6	2·6	151
1889	127,781	31·5	22·7	3·3	1·9	2·8	2·6	178
1890	129,878	31·0	24·4	2·5	2·0	3·4	3·1	180
1891	132,010	30·8	25·6	2·3	1·9	3·7	3·3	193
Average 5 y'rs		**32·1**	**24·2**	**2·9**	**1·9**	**3·1**	**2·7**	**178**
1892	134,221	28·9	21·9	2·6	2·1	2·7	2·3	177
1893	136,469	28·5	20·96	2·5	1·9	2·2	2·3	186
1894	138,755	27·1	18·5	1·8	1·9	2·0	1·8	162
1895	141,079	27·4	21·9	2·7	1·7	2·6	2·3	190

TABLE No. 7.

Showing the number of deaths from the Seven Principal Zymotic Diseases in the Borough of Oldham, during the years 1877-1895.

Year	Population	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Fever Typhus and Typhoid	Diarrhœa	Total Deaths
1877	99,557	19	11	58	11	111	28	58	296
1878	102,573	1	114	240	26	77	36	93	587
1879	105,679	...	9	136	19	60	25	46	295
1880	108,880	...	96	131	9	70	28	142	476
1881	112,176	9	7	87	10	36	39	69	257
1882	114,017	4	69	58	10	77	26	74	318
1883	115,888	2	6	21	9	38	26	76	178
1884	117,791	..	193	33	7	36	22	149	440
1885	119,724	...	54	20	14	104	18	46	256
1886	121,690	...	89	32	29	57	30	134	371
1887	123,687	...	176	103	62	100	25	89	555
1888	125,717	13	53	66	36	40	24	43	275
1889	127,781	...	126	54	16	127	20	78	421
1890	129,878	...	95	25	6	82	15	96	319
1891	132,010	...	97	25	18	71	27	68	306
1892	134,221	15	139	42	18	68	16	56	354
1893	136,469	65	29	16	16	56	26	140	348
1894	138,755	22	56	21	39	58	15	46	257
1895	141,079	23	97	16	25	57	26	143	387

TABLE No 8.

Weekly Means of Meteorological Observations for the year 1895.

Date	Barometer reduced to Sea Level at 32·0	Thermometer	Hygrometer		% of Saturation	Temperatures.							Distance travelled by the Wind in 24 hours.	Pressure of Wind in lbs. per square foot.	Rainfall 12in. above ground.	Number of Days on which rain fell	Clouds covered = 10 clear = 0
			Dry	Wet		Maximum Shade	Minimum in Shade.	Maximum in Sun Black Bulb	Maximum in Sun Black Bulb in Vacuo	Minimum on Grass.	Temperature 12in. below surface.	Temperature 4 ft below surface.					
1895																	
January 5	29·95	32	33	32	90	36	28	41	52	23	34	42	*	...	·10	2	7
12	29·93	28	29	28	81	33	25	38	46	18	32	41	*	...	...	...	7
19	29·33	36	35	35	100	37	30	39	45	30	31	40	*	...	1·37	6	10
26	29·68	33	33	32	88	37	29	39	52	25	31	39	*	...	1·07	6	8
February 2	30·44	28	28	28	100	30	23	35	47	19	31	39	*	...	...	...	9
9	30·12	23	24	23	88	30	20	45	60	15	30	38	*	...	...	...	6
16	30·28	26	25	25	100	31	19	42	60	14	28	37	*	...	...	...	6
23	30·48	30	31	31	100	36	26	40	50	22	28	37	*	...	..	...	9
March 2	29·99	35	35	34	90	39	29	45	57	27	30	36	*	...	·39	2	9
9	29·84	35	35	34	90	38	30	44	60	26	29	36	174	·26	·61	4	8
16	30·07	41	41	40	92	46	35	52	63	30	29	36	113	·11	·13	3	10
23	30·09	45	45	43	85	50	39	47	70	37	32	36	147	·18	·57	4	8
30	29·19	43	43	43	100	46	37	51	59	35	38	39	292	·73	1·75	7	10
April 6	29·95	39	39	37	84	44	32	50	65	30	36	39	192	·32	·83	5	8
13	30·13	48	47	42	67	52	36	59	83	33	39	41	227	·44	·23	1	9
20	30·06	49	48	44	73	54	38	62	83	35	42	41	229	·45	·18	1	6
27	29·77	51	50	47	80	55	45	60	78	42	45	43	220	·42	·62	6	10

	29	30·25	64	63	59	77	69	54	77	97	49	56	53	63	·03	2·39	5	6
July	6	30·06	59	59	54	71	63	50	72	97	46	56	54	72	·04	1·19	6	8
	13	30·07	60	59	53	67	66	50	73	98	*	57	54	79	·05	·59	4	6
	20	29·89	58	57	55	87	62	52	70	91	50	57	55	115	·11	1·33	5	10
	27	29·77	59	58	56	87	65	53	73	96	51	58	55	91	·07	4·57	7	9
August	3	29·94	59	58	53	71	63	50	72	95	46	57	56	62	·03	·09	2	10
	10	29·70	58	58	54	76	62	51	71	95	49	56	55	88	·06	·78	5	9
	17	30·00	61	60	56	76	65	53	73	96	50	57	55	93	·07	1·38	5	10
	24	30·08	64	63	59	77	71	54	78	98	48	59	56	44	·01	·36	2	7
	31	30·13	59	60	54	67	63	52	69	91	50	57	57	184	·28	1·34	4	10
Septem.	7	30·09	64	62	58	77	66	51	74	93	47	57	56	67	·03	1·24	4	7
	14	30·12	60	59	55	76	65	51	73	96	47	56	56	138	·16	·32	2	7
	21	30·34	57	56	53	81	63	49	71	88	44	55	56	43	·01	...	...	8
	28	30·35	70	69	61	60	73	55	80	102	46	55	55	21	...	·05	2	4
October	5	29·76	58	56	52	75	66	46	73	94	40	55	55	100	·08	1·47	4	6
	12	29·74	49	49	47	86	52	44	60	75	41	49	54	94	·07	1·26	6	9
	19	30·37	48	48	45	79	52	41	58	72	36	47	52	60	·03	·32	2	5
	26	29·91	39	38	37	91	43	33	50	59	29	42	51	42	·01	·58	4	9
Novem.	2	30·13	37	37	35	83	41	32	44	54	26	38	48	55	·02	·16	1	9
	9	29·79	46	46	44	86	49	41	53	60	38	42	47	74	·04	·41	3	10
	16	29·51	47	47	46	93	52	40	54	64	35	43	47	200	·34	1·03	7	8
	23	30·16	46	44	43	92	51	39	52	62	35	42	47	149	·19	·79	5	6
	30	30·15	44	43	41	85	45	39	48	58	36	40	46	230	·45	·32	3	8
Decem.	7	29·80	41	41	40	92	47	37	49	53	34	41	45	261	·60	1·25	7	10
	14	29·86	37	37	36	91	42	33	45	48	28	37	44	124	·13	1·29	5	9
	21	29·70	37	37	36	91	41	33	45	53	29	36	43	102	·09	·65	2	10
	28	30·02	34	33	33	100	34	30	38	43	26	33	42	304	·79	·07	1	7
Mean		30·02	48	47	44	79	52	40	58	75	36	44	47	125	·13	34·87	161	8

* Instruments being repaired.

TABLE No. 9.

Return of Inquests held in Oldham, touching the cause of death of any person, for the year ended 31st December, 1895.

INQUESTS.	Males	Females.
Infants (Legitimate), under 1 year	20	15
,, 1 year and under 7 years	13	12
Infants (Illegitimate or unknown) under 1 year	2	...
,, 1 year and under 7 years	2	...
Children, 7 years and under 16	3	5
Youths, 16 years and under 25	4	1
Adults, 25 years and under 60	47	23
Aged, 60 years and above	31	11
Total	122	67

VERDICTS.	Males.	Females.
Manslaughter	...	1
Suicide, while Insane	11	1
Accidental Death	41	22
Suffocated whilst in bed with parents or others	6	...
Found Dead	1	...
Disease aggravated by neglect by others	2	...
From Want, Cold, Exposure, &c	...	1
Natural Causes	61	42
Inquests on the bodies of Newly-born Children	1	1
Total Costs	£326 11 2	

TABLE No. 10.

Prices of Coal, Bread, Flour, Butchers' Meat, and Potatoes, and the number of Paupers relieved in Oldham, 1885-95.

	Coal per Ton.	Bread per dozen lbs.	Flour per load.	Meat per lb.	Potatoes per load.	Weekly No. of Indoor Poor.
	s. d.	d.	s. d.	d.	s. d.	
1885	7 9	11¼	. .	5	6 5	890
1886	8 0	11¼	...	5¼	7 4	931
1887	7 6	...	24 6	4½	8 10	910
1888	7 6	...	25 3	5	6 4	936
1889	8 4	..	26 10	5	7 6	946
1890	10 10	...	26 10	4⅞	6 11	921
1891	10 7	...	29 2	4⅞	10 2	901
1892	9 7	...	26 3	4⅝	7 4	937
1893	11 7	...	21 6	4½	6 6	1,011
1894	9 4	...	18 4	4¼	6 6	1,075
1895	7 8	...	17 0	4⅛	6 9	1,089

TABLE No. 11.

BOROUGH OF OLDHAM.

Deaths Registered at Several Groups of Ages from Different Causes during the Year ending December 28th, 1895.

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
Classes.														
I.—Specific Febrile, or Zymotic Diseases ...	198	215	413	53	70	89	65	74	24	20	23	10	3	8
II.—Parasitic Diseases ...	...	...	...	...	...	...	...	...	..	...	...	..	...	..
III.—Dietetic Diseases ...	1	...	1	...	...	4	2	3	...	...	1	...	...	
IV.—Constitutional Diseases...	1	6	7	7	7	9	20	37	19	10	28	4	...	1
V.—Developmental Diseases...	100	...	100	...	...	...	...	1	...	4	39	51	6	2
VI.—Local Diseases	293	228	521	69	54	73	115	186	114	126	233	76	5	15
VII.—Deaths from Violence	6	13	19	2	2	10	5	10	3	8	7	1	...	
VIII.—Deaths from Ill-defined and Not Specified Causes ...	138	26	164	5	1	8	11	16	12	9	14	2	7	2
Totals	737	488	1225	136	134	193	218	327	172	177	345	149	16	30
I.—Specific Febrile, or Zymotic Diseases.														
1. *Miasmatic Diseases.*														
Smallpox	1	4	5	5	1	6	2	4	...	...	...	...	...	2
Measles.....	25	71	96	1	..	...	...	...	...	...	...	...	..	9
Scarlet Fever	2	14	16	...	...	...	...	...	...	...	...	...	...	1
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough	26	28	54	3	...	...	...	...	...	..	...	...	...	5
Diphtheria	6	13	19	6	..	...	...	...	...	..	...	...	...	2
Simple Continued and Ill-defined Fever	..	...	...	...	...	..	...	...	...	...	...	...	...	
Enteric or Typhoid Fever	1	1	2	4	9	2	6	3	...	...	...	...	...	2
Tabes Mesenterica	7	10	17	3	...	...	...	...	...	...	...	...	...	2
Tubercular Meningitis, Hydrocephalus	10	18	28	10	1	2	...	...	...	...	...	...	...	4
Phthisis	2	5	7	10	46	64	50	43	9	12	3	1	...	24
Other Forms of Tuberculosis, Scrofula	17	8	25	6	5	2	1	1	...	2	1	...	...	4
Influenza	5	4	9	2	5	7	4	18	9	4	10	8	1	7
2. *Diarrhœal Diseases.*														
Simple Cholera	..	...	...	...	...	...	...	...	...	...	...	..	...	
Diarrhœa, Dysentery	86	38	124	2	...	...	...	2	4	2	6	1	2	14

TABLE No. 11—Continued.

Cause of Death.	AGES.												
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	65 to 65	65 to 75	75 to 85	85 and upwards
3. *Malarial Diseases.*													
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague	...	...	...	...	...	...	...	...	...	...	...	...	...
4. *Zoogenous Diseases.*													
Cowpox and Effects of Vaccination	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases, Hydrophobia, Glanders, Splenic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
5. *Venereal Diseases.*													
Syphilis	7	1	8	...	...	...	1	1	2	...	...	...	...
Gonorrhœa, Stricture of Urethra	...	...	...	...	...	...	...	...	..	...	...	..	...
6. *Septic Diseases.*													
Erysipelas	3	...	3	...	...	...	...	2	...	...	3	...	...
Pyæmia, Septicæmia	...	...	...	1	1	1	...	...	...	...	...	...	...
Puerperal Fever	...	...	..	...	2	5	1	...	...	...	...	...	...
II.—Parasitic Diseases.													
Thrush, and other Vegetable Parasitic Diseases	...	...	...	..	...	...	...	...	...	...	...	...	...
Worms, Hydatids, and other Animal Parasitic Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...
III.—Dietetic Diseases.													
Want of Breast Milk, Starvation	1	...	1	...	...	...	...	..	...	...	...	...	...
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...
Chronic Alcholism	...	...	...	...	...	4	1	3	...	...	1	...	...
Delirium Tremens	...	...	...	...	...	...	1	...	...	...	...	...	...
IV.—Constitutional Diseases.													
Rheumatic Fever, Rheumatism of the Heart	...	...	...	7	4	3	3	3	1	...	...	...	...
Rheumatism	...	...	...	...	...	..	2	1	3	2	3	...	...
Gout	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	2	2	...	...	...	...	...	...	...	..	...	...
Cancer, Malignant Disease	...	2	2	...	...	4	12	27	15	7	23	4	...
Purpura, Hæmorrhagic Diathesis	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia, Chlorosis, Leucocythæmia	1	2	3	..	..	1	2	2	..	...	1	...	...
Glycosuria, Diabetes Mellitus	...	...	...	...	3	1	1	4	...	1	1	...	...
Other Constitutional Diseases	...	..	...	...	...	...	..	..	...	...	...	...	...

TABLE No. 11—Continued.

Cause of Death.	AGES.												Totals.
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
V.—Developmental Diseases.														
remature Birth	79	...	79	...	...	...	...	...	...	...	...	...	...	79
telectasis	6	...	6	...	...	...	...	...	...	...	...	...	...	6
ongenital Malformations	15	...	15	...	...	...	...	...	...	...	...	...	...	15
ld Age	...	...	...	...	...	...	...	1	...	4	39	51	6	101
VI.—Local Diseases.														
Diseases of Nervous System.														
nflammation of Brain or Membranes	17	31	48	12	5	1	3	2	...	...	1	...	...	72
poplexy, Softening of Brain, Hemiplegia, Brain Paralysis.	...	...	...	1	...	4	13	33	23	22	48	10	...	154
nsanity, General Paralysis of the Insane	...	...	...	...	...	...	...	..	...	1	...	...	...	1
pilepsy	...	...	...	2	6	5	3	1	...	1	1	...	...	19
onvulsions	74	30	104	2	...	...	...	...	...	...	...	...	...	106
aryngismus Stridulus (Spasm of Glottis)	4	2	6	...	...	...	...	...	...	...	..	...	...	6
isease of Spinal Cord, Paraplegia, Paralysis Agitans	...	...	...	...	...	.	2	1	1	1	1	1	...	7
ther Diseases of Nervous System	...	1	1	...	...	...	1	...	...	..	..	1	...	3
2. *Diseases of Organs of Special Sense.*														
f Ear, Eye, Nose	...	...	...	2	...	...	...	...	...	1	...	...	...	3
3. *Diseases of Circulatory System.*														
ericarditis	...	...	...	1	...	...	...	..	..	...	...	...	...	1
cute Endocarditis	...	...	...	.	...	1	1	1	...	...	2	...	...	5
alvular Diseases of Heart	...	...	...	5	5	2	14	13	6	5	11	1	...	62
ther Diseases of Heart	1	2	3	6	2	10	12	20	13	20	43	13	1	143
neurism	...	...	...	...	...	...	1	...	2	...	2	...	...	5
mbolism, Thrombosis	...	...	...	...	1	...	...	2	...	...	...	...	...	3
ther Diseases of Blood Vessels	..	...	...	...	...	...	...	...	...	...	1	...	...	1
4. *Diseases of Respiratory System.*														
aryngitis	1	5	6	..	1	...	...	...	...	..	...	...	...	7
roup	5	22	27	5	...	...	..	...	...	...	...	...	...	32
mphysema, Asthma	...	...	...	...	...	...	...	1	1	1	1	1	...	5
ronchitis	75	40	115	7	5	3	13	31	39	37	75	38	4	367
neumonia	64	71	135	16	15	29	34	45	15	14	16	7	...	326
leurisy	...	...	...	...	...	...	...	...	...	1	1	...	...	2
ther Diseases of Respiratory System	9	5	14	...	1	...	1	2	...	1	1	...	...	20

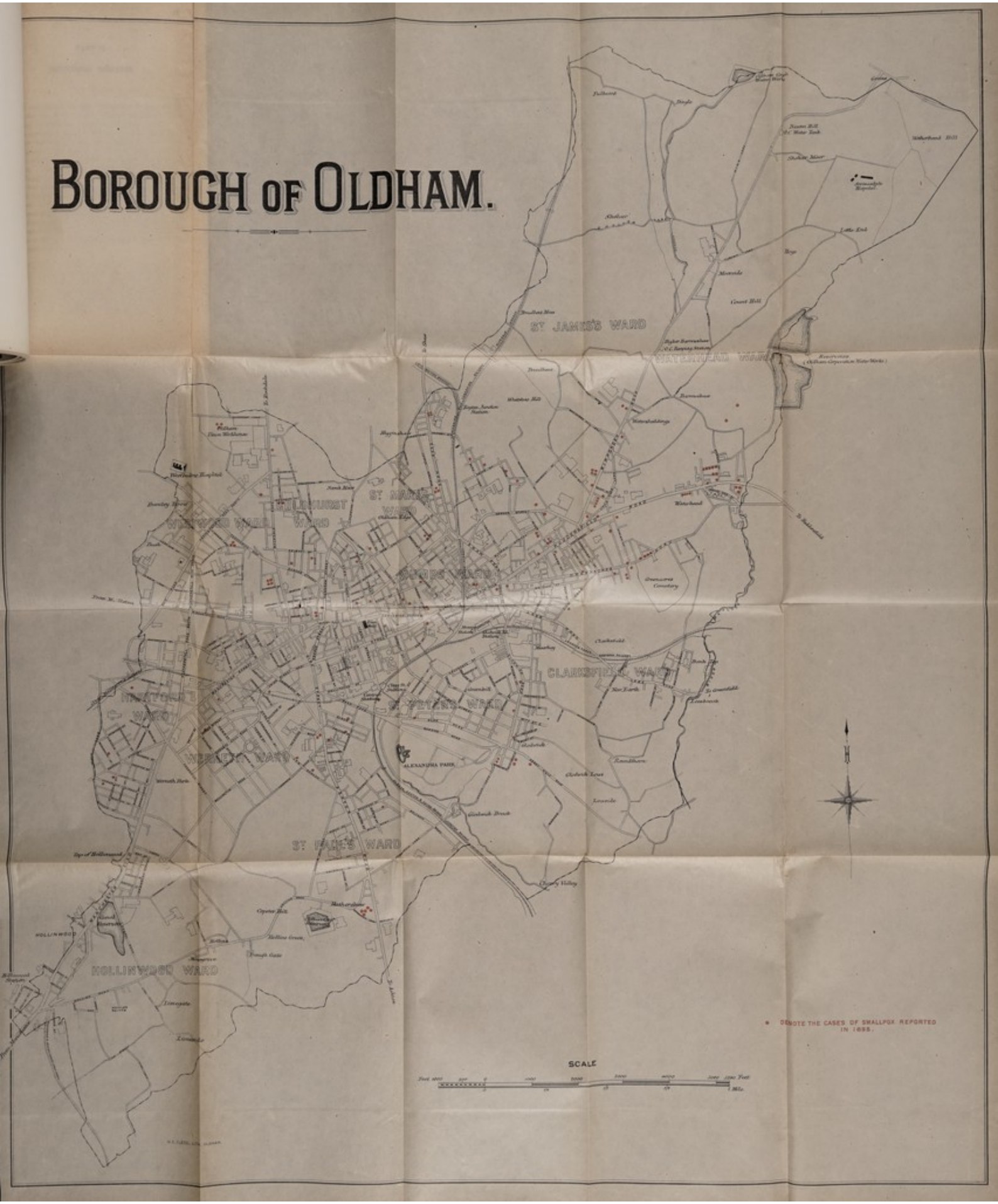
TABLE No. 11—Continued.

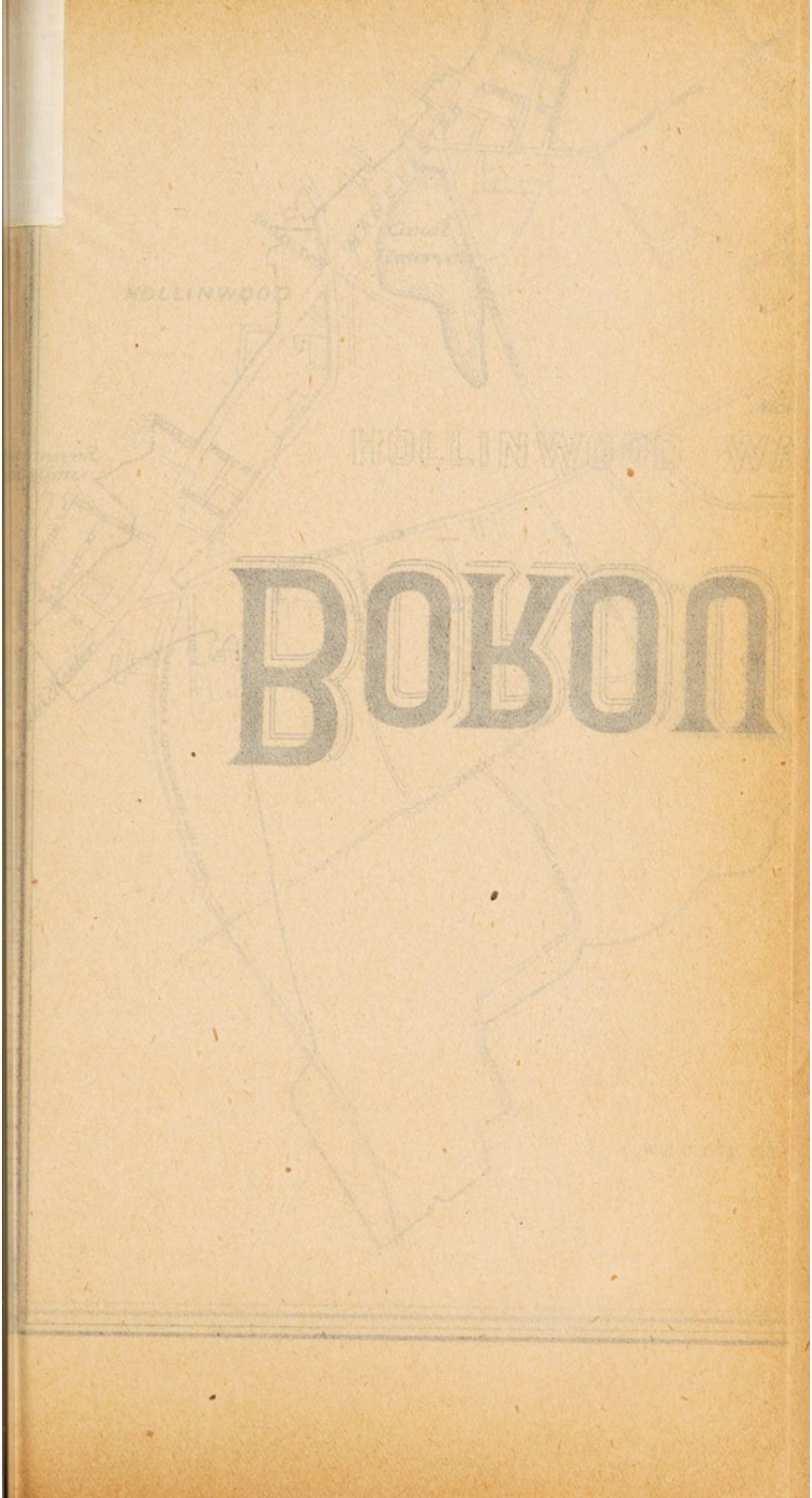
Cause of Death.	AGES.													
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards
5. Diseases of Digestive System.													
Dentition	4	4	8	...	...	...	...	...	...	...	...	...	...
Sore Throat, Quinsy	1	...	1	..	...	...	...	...	...	...	...	...	...
Diseases of Stomach	7	...	7	1	1	1	...	2	...	1	2	...	...
Enteritis	21	8	29	1	2	...	..	5	2	1	...	...	...
Obstructive Diseases of Intestines	1	...	1	1	2	1	1	2	2	1	3	...	...
Hernia	...	...	...	...	...	...	1	2	1	...	3	...	...
Peritonitis	...	...	...	...	2	1	3	1	2	...	1	...	...
Ascites	...	...	...	...	...	...	..	...	...	...	...	...	...
Cirrhosis of Liver	...	...	...	...	...	...	1	8	2	3	2	1	...
Jaundice and other Diseases of Liver	2	...	2	...	...	...	...	...	...	2	2	...	...
Other Diseases of Digestive System	4	2	6	1	...	..	...	...	1	..	1	...	...
6. Diseases of Lymphatic System.													
Of Lymphatics and of Spleen	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Diseases of Glandlike Organs of Uncertain Use.													
Bronchocele, Addison's Disease	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Diseases of Urinary System.													
Nephritis	1	3	4	1	4	...	1	2	...	...	3	...	...
Bright's Disease, Albuminuria.	1	1	2	3	2	6	4	8	4	7	6	1	...
Disease of Bladder or of Prostate	...	...	...	...	...	...	...	...	...	3	1	1	...
Other Diseases of the Urinary System	...	...	...	...	...	1	...	2	...	1	1	1	...
9. Diseases of Reproductive System.													
A. Of Organs of Generation.													
Male Organs	...	1	1	...	...	...	...	...	...	...	...	...	...
Female Organs	...	...	...	...	...	1	...	2	...	1	...	...	...
B. Of Parturition.													
Abortion, Miscarriage	...	...	...	...	...	1	...	...	...	...	...	...	...
Puerperal Convulsions	...	...	...	...	...	1	...	...	...	...	...	...	...
Placenta prævia, Flooding	...	...	...	...	...	2	1	...	...	...	...	...	...
Other Accidents of Childbirth.	...	...	...	...	...	2	3	...	...	..	...	...	...
10. Diseases of Bones and Joints.													
Caries, Necrosis	...	...	...	2	...	1	...	...	...	1	4	...	...
Arthritis, Ostitis, Periostitis...	...	...	...	...	...	...	2	...	...	...	...	...	...
Other Diseases of Bones and Joints	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 11—Continued.

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years.	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
Diseases of Integumentary System.														
rbuncle, Phlegmon	...	...	...	...	...	...	...	...	...	...	...	...	...	...
her Diseases of Integumentary System	1	..	1	...	...	...	...	...	...	..	...	...	...	1
VII.—Deaths from Violence.														
Accident or Negligence.														
actures and Contusions.....	..	1	1	...	1	5	2	4	1	5	3	1	...	23
nshot Wounds	...	...	..	...	...	..	...	...	...	...	...	...	...	...
t, Stab	...	...	...	..	..	...	...	...	...	...	...	...	...	...
rn, Scald	...	12	12	...	...	1	1	3	...	1	2	...	...	20
ison	...	...	...	..	...	...	2	...	1	..	...	...	...	3
owning	...	...	...	2	...	...	...	...	...	...	1	...	...	3
ffocation	6	...	6	...	...	1	...	...	...	...	...	...	...	7
herwise.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. *Homicide.*														
nslaughter	...	...	...	...	...	1	...	...	...	..	...	...	...	1
rder..... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. *Suicide.*														
nshot Wounds	...	...	...	...	...	...	...	1	...	1	...	...	...	2
t, Stab	...	...	...	...	...	...	...	...	1	1	...	...	...	2
ison	...	...	...	...	...	1	...	...	...	...	...	...	...	1
owning	...	...	...	...	1	1	...	1	...	...	1	...	...	4
nging	...	...	...	...	...	...	...	1	...	...	...	...	...	1
herwise...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
III.—Deaths from Ill-Defined and not Specified Causes.														
opsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
bility, Atrophy, Inanition...	101	14	115	1	...	...	...	2	2	2	...	1	...	123
rtification	...	..	...	...	...	...	...	...	...	2	3	...	...	5
mour.....	...	...	...	...	...	...	1	...	...	...	...	...	...	1
scess.....	1	...	1	...	...	2	1	1	...	...	...	...	...	5
emorrhage	...	...	...	...	...	...	...	...	...	...	...	...	1	1
lden Death (cause not ascertained)	7	3	10	...	1	1	...	3	...	1	...	2	...	18
ses not Specified or Ill-defined	29	9	38	4	...	5	9	10	10	4	11	4	1	96

BOROUGH OF OLDHAM.




BOKON

PART II.

INFECTIOUS DISEASES.

The total number of cases of Infectious Disease notified during the year 1895 was 537, which is 37 less than last year, and 59 below the average for the past five years.

The conclusion, however, that the Borough has suffered less from Infectious Disease, which might be drawn from these figures, would be quite erroneous, as other infectious diseases, which are not notifiable, have been epidemic during the year. These include Influenza, Measles, Diarrhœa, and Whooping Cough.

Of the notifiable diseases, 137 cases of Smallpox, 216 cases of Scarlet Fever, 70 cases of Diphtheria, 109 cases of Enteric or Typhoid Fever, and 5 cases of Puerperal Fever were reported during 1895.

This shows an increase on the previous year of 40 cases of Enteric Fever and 3 cases of Diphtheria, while there is a decrease of 28 cases of Smallpox, 48 cases of Scarlet Fever, and 4 cases of Puerperal Fever.

The marked features of the year with respect to Infectious Diseases were a short but severe epidemic of Influenza in March, a sharp attack of Diarrhœa in September, an increase in Enteric Fever in October, and the commencement of another epidemic of Smallpox in May, which had not completely subsided by the end of the year.

Table E.

SMALLPOX—1895.

Ages.	Borough.			Vaccinated.			Unvaccinated.		
	Cases.	Deaths		Cases.	Deaths		Cases.	Deaths	
		Total.	Per Centage.		Total.	Per Centage.		Total	Per Centage.
Under 5 years	18	5	27·8	2	...	...	16	5	31·2
5 to 10	17	5	29·4	6	1	16·6	11	4	36·3
10 to 15	11	...	...	6	...	...	5	...	...
15 to 25	26	1	3·8	26	1	3·8	...	...	...
25 to 35	39	6	15·4	36	5	13·8	3	1	33·3
35 to 45	15	3	20·0	15	3	20·0	...	...	...
45 to 55	9	4	44·4	8	3	37·5	1	1	100·0
Over 55	2	...	...	2	...	...	...	...	...
Total	137	24	17·5	101	13	12·8	36	11	30·5

SMALLPOX.

The epidemic of Smallpox which commenced in May, 395, is another instance of the dangers arising from the ncontrolled movement of tramps to which attention has een so forcibly drawn by Dr. Armstrong, of Newcastle-on-yne.

The first two cases occurred at a common lodging ouse, situated in Campbell Street, and were reported to e on the 14th of May. The rash in the first case, owever, actually appeared on the 11th May. The two atients had been living at this lodging house for some me and careful enquiry failed to elicit any contact with mallpox except one occurring on the 27th of April, on hich date a woman slept at this lodging house, who, the llowing day was found at the Rochdale workhouse to be ffering from smallpox. She had tramped the country ntinuously for some weeks, but I was unable to ascertain here she had been about the date of Infection. Two ther cases occurred among the inmates of the lodging ouse, and a third occurred in a child (daughter of case o. 1) removed from this lodging house to the workhouse here it was followed by two other cases.

These first seven cases would appear to be all traceable the tramp above referred to, but on the 20th of June, hat is about 5 weeks after the appearance of the first case, fresh outbreak of an acute nature occurred; two cases ere reported on the 20th, two on the 21st, four on the 2nd, four on the 23rd, three on the 24th, five on the 25th, nd three on the 26th, one on the 27th and one on the 28th, twenty-five cases in the nine days.

These twenty-five cases were scattered all over the town, being returned from 8 out of the 12 wards into which the Borough is divided. There was, however, a large preponderance in Waterhead Ward, 12 out of the 25 cases being reported from that district, which is two miles from the lodging house above mentioned and more than three miles from the workhouse. It lies about a mile from the Smallpox Hospital, but the road to the latter does not approach at any point the neighbourhood of these cases.

Table F.

Showing the effect of Vaccination and Re-vaccination on the Residents in houses where cases of Smallpox occurred (omitting the first cases themselves) in preventing Smallpox.

98 Houses Affected.

Had Smallpox.	Vaccinated.			Re-Vaccinated.			Unvaccinated.		
	Total.	Acquired Smallpox.	Per-centage.	Total.	Acquired Smallpox.	Per-centage.	Total.	Acquired Smallpox.	Per-centa
18	261	18	6·9	137	2	1·4	23	12	52·

Residents in the workhouse and in the two lodging houses are not included as the great proportion were not exposed to Infection, and it was impossible to say exactly how many, but it was ascertained that almost all the remaining inmates at both places were vaccinated. Two secondary cases occurred at the workhouse and two at one common lodging house; these, if taken into consideration, would reduce the percentage of vaccinated persons attacked by more than one-half, but as they would introduce an element of doubt into the figures have been omitted.

I was unable to trace a connection between any of these 25 cases and the previous ones, and the only circumstances common to them all is that they were all taking part in the festivities in the streets of the town on the Whit-Thursday, Friday, and Saturday, and the following Sunday, that is June 6th, 7th, 8th, and 9th. The whole 25 cases would appear to date their infection to one of these four days, several of them having been in existence for some days before being reported to the department. I am consequently driven to the conclusion that there must have been some overlooked case or cases, probably connected with the earlier outbreak, going about the town on the four days above named and scattering the infection broadcast.

A fortnight after the first untraced case a second series commenced, all of them however traceable to one or other of the 25 untraced cases, and the number of cases was kept up for another fortnight as is shown on the accompanying chart from which point it rapidly dropped, and although cases continued to occur up to the end of the year they were only in small numbers. As a matter of fact twice when we appeared to have stamped out the infection it was reintroduced from the sorrounding districts who had previously acquired it from us.

There was, so far as I could learn, only one overlooked case after the first outburst and this was followed by six other cases traceable to it. This is somewhat exceptional for Oldham as previous experience has shown the overlooked cases to be the main cause of continuance of Smallpox epidemic, added to the fact of the steadily increasing unvaccinated condition of the town, and this is satisfactory as showing how much more alert to the symptoms of mild smallpox both the medical profession and the public have become.

Table G.

Showing the effect of Vaccination and Re-vaccination at various dates after exposure to infection.

Day after exposure to Infection.	Vaccinated	Contracted Smallpox.	Per cent.	Re-Vaccinated	Contracted Smallpox	Pe cen
Same day	13	...	...	17	...	..
1 day after	7	...	...	13	...	..
2 days ,, ...	21	...	...	27	*1	3
3 ,, ,, ...	12	3	25	25	...	..
4 ,, ,, ...	6	3	50	19	...	..
5 ,, ,, ...	...	...	...	7	...	..
6 ,, ,, ...	1	...	...	4	...	..
7 ,, ,, ...	...	...	...	...	...	..
9 ,, ,, ...	1	1	100	1	...	..
13 ,, ,, ...	1	1	100	1	1	10
Totals	67	8	12·9	114	2	1

* Re-Vaccination in this case unsuccessful.

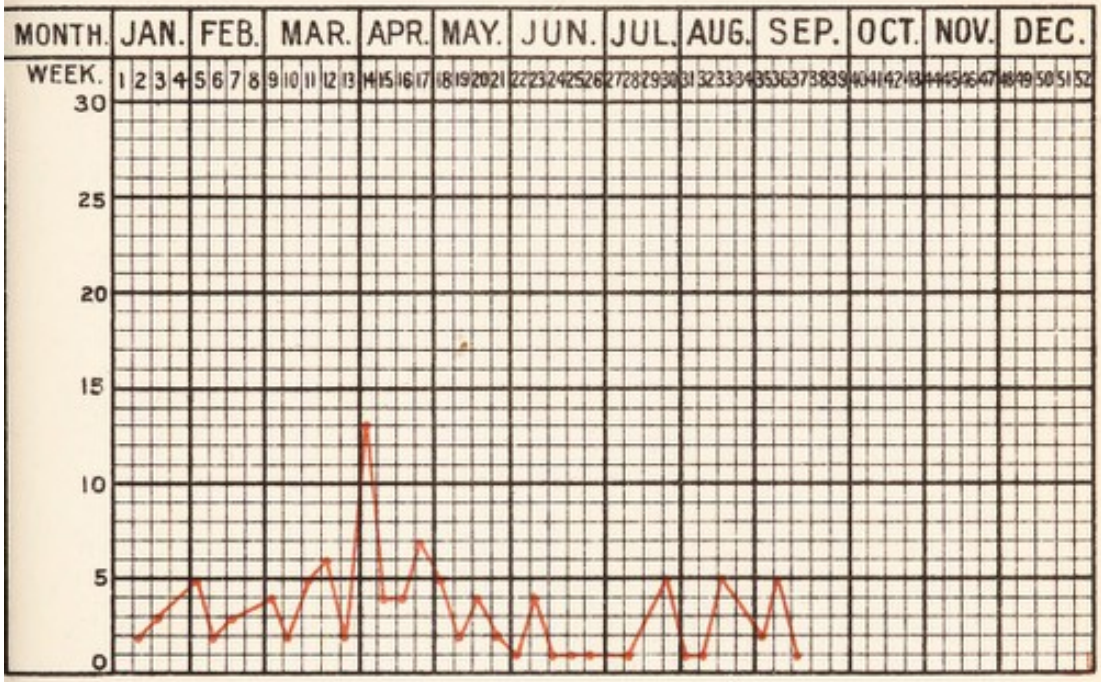
All but four cases were removed to the Isolatic Hospital, three of these were quite trivial cases and th fourth died before removal was possible. In no other cas was any serious difficulty experienced in getting the case removed.

Cases occurred in all the wards, except Hollinwoo which fortunately escaped, Waterhead Ward with 31 case St. James's Ward with 27 cases, and Mumps Ward with 1 cases, suffered must severely. The locality of each ca is shown in detail on the accompanying spot map.

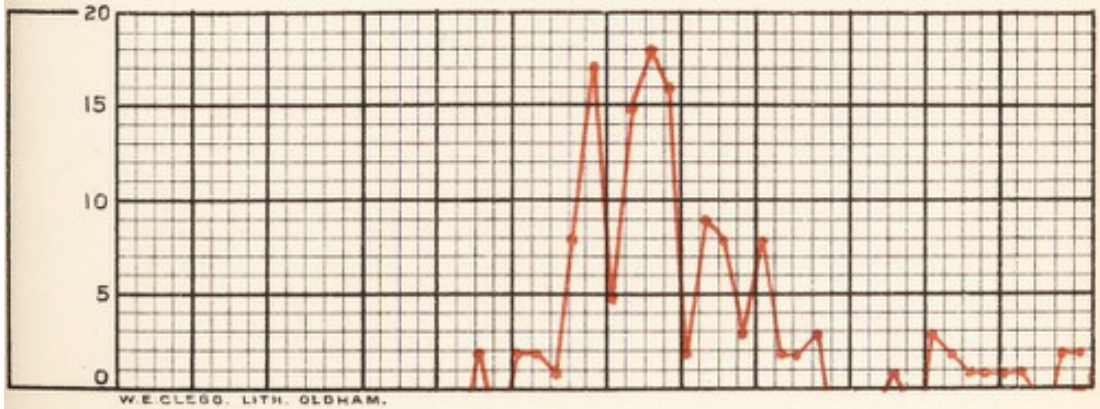
BOROUGH OF OLDHAM.

SMALL POX CASES.

1888.



1895.



W.E.CLEGG. LITH. OLDHAM.

The weekly incidence of the disease is shown on the accompanying chart, and similar charts of the two preceding epidemics are also given for purposes of comparison.

Table H.

SMALLPOX, 1895.

Showing nature of the attack in Vaccinated and Unvaccinated persons.

	Borough.				Vaccinated.				Unvaccinated.			
	Trivial	Discrete.	Confluent	Hæmorrhagic	Trivial.	Discrete.	Confluent.	Hæmorrhagic	Trivial.	Discrete.	Confluent.	Hæmorrhagic
Under 5 years	...	8	8	2	...	2	...	...	...	6	8	2
5-10 ,,	2	7	8	..	2	3	1	...	...	4	7	...
10-15 ,,	1	5	5	...	1	5	...	...	..	...	5	...
15-25 ,,	6	17	3	...	6	17	3	...	...	...	...	...
25-35 ,,	6	21	10	2	6	21	8	1	...	...	2	1
35-45 ,,	4	5	5	1	4	5	5	1	...	...	...	...
45-55 ,,	2	2	5		2	2	4	...	...	...	1	...
over 55 ,,	..	...	1	1	...	...	1	1	...	...	...	...
Total	21	65	45	6	21	55	22	3	...	10	23	3
	137				101				36			

SMALLPOX AND VACCINATION.

In the following tables, E, F, G, H, I, J, K, the details of the cases and the infections which followed them with respect to vaccination are set out in detail. The results shown by these tables once more confirm the conclusions arrived at previously, and in discussing this question I propose to examine—first, the the influence of primary vaccination as protecting from (*a*) Smallpox, (*b*) Severe Smallpox, and (*c*) Fatal Smallpox, and as performed after exposure to infection; and secondly, the influence of re-vaccination in preventing Smallpox.

It should be stated that, in order to avoid any possible suggestion of endeavouring to favour vaccination, every case where it has been possible to discover a vaccination mark is classed with the vaccinated, no matter how inefficiently the operation may have been performed.

(*a*) Influence of Primary Vaccination in protecting from Smallpox.—A glance at Table E shows us that 101 out of 137 attacks of Smallpox occurred in vaccinated persons, and that in a town where the great majority of children under 10 years of age are unvaccinated. A closer examination of the figures, however, reveal the fact that this excess of Smallpox among the vaccinated only commences at age periods over 10 years. From this point it steadily increases. It must not be forgotten that the great bulk of the population is over 10 years of age, and also that the efficacy of primary vaccination as a preventative of Smallpox is a steadily diminishing quantity with advancing age.

BOROUGH OF OLDHAM.

SMALL POX CASES.

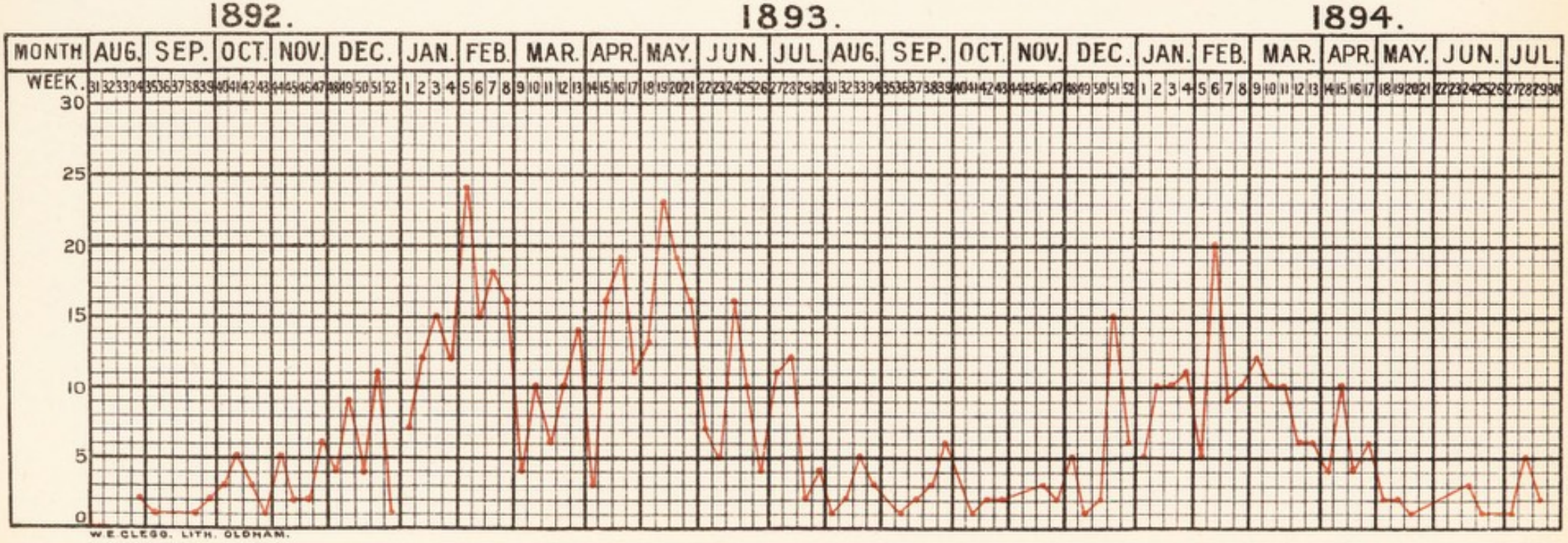


TABLE I.

List of Cases of Smallpox occurring in persons Unvaccinated at time of Infection, but Vaccinated subsequently.

No.	Name.	Age.		Character of Attack.	Result.		Remarks.
		M.	F.		R.	D.	
55	T. O. ..	5	...	C	...	D	Vaccinated 4 days after infection
56	F. O. ..	3	...	C	...	D	,, ,, ,,
82	N. C. ..	...	9	D	R	...	,, 3 ,,
83	E. C. ..	..	5	D	R	..	,, ,, ,,
84	J. C. ...	4	...	D	R	...	,, ,, ,,
53	B. W....	...	10 months	D	R	..	,, 7 ,,
112	A. B. ...	...	2*	D	R	...	,, 14 ,,
133	H. P....	...	6	C	R	...	,, 9 ,,

* Included in Unvaccinated, as only vaccinated when rash appeared.

TABLE J.

List of Cases of Smallpox occurring in persons Vaccinated at time of Infection, but Re-Vaccinated subsequently.

No.	Name.	Age.		Character of Attack.	Result.		Remarks.
		M.	F.		R.	D.	
46	M. W....	...	29	T	R	...	Vaccinated in childhood, two marks indistinct. Re-vaccinated *unsuccessfully* two days after infection.
42	T. C. ...	37	...	D	R	...	Re-Vaccinated 13 days after infection and one day before appearance of rash.

A much better test than the actual condition of the cases as regards vaccination, of its effect in preventing Smallpox, is the proportion of unvaccinated persons who subsequently develope Smallpox after exposure to infection compared with those who were vaccinated or re-vaccinated.

This is shown in Table F, from which it will be seen, firstly, how comparatively few persons remained unvaccinated after exposure by living in the same house where a case of Smallpox was found, only 23 out of a total of 521 persons thus remaining unvaccinated; and secondly, how large a proportion of these persons acquired Smallpox, viz., 12 out of the 23, or no less than 52·1 per cent. When this is compared with the 6·9 per cent. among the vaccinated, and 1·4 per cent. among the re-vaccinated (really none at all, as will be shown later), it seems impossible for any one to doubt the effect of primary vaccination in preventing Smallpox, although, as mentioned above, this protection cannot be relied on indefinitely, and should be succeeded by the much more efficient protection of re-vaccination.

It is, I think, most instructive to notice the bearing of the fact, of the small number of persons remaining unvaccinated after exposure to infection, on the limitation of the epidemic even among a population previously to a great extent unvaccinated; and I believe we have to thank this procedure for the fact that the disease has not spread widely among the juvenile section of the community. What I have often found to happen on an outbreak of Smallpox in a house is that unvaccinated children are at once vaccinated, but the older members of the family who have been previously vaccinated do not care for the trouble, and often loss of work, which may follow a successful re-vaccination.

TABLE K.

List of Cases of Smallpox occurring in Unvaccinated persons.

No.	Name.	Age.		Character of Attack.	Result.		Remarks.
		M.	F.		R.	D.	
1	C. D. ...	...	31	H	R	...	
3	G. L. ...	3 months	...	C	...	D	Died on eighth day after appearance of rash.
5	E. T. ...	..	4	D	R	...	
8	J. C. ...	7	...	D	...	D	
10	S. B. ..	6	...	H	...	D	
11	L. R. ...	...	13	C	R	...	Unsuccessfully vaccinated when a child.
12	W. O....	1	...	C	...	D	
13	A. K. ...	...	6	D	R	...	
14	G. L. ...	...	4	D	R	...	
15	M. S. ...	...	12	D	R	...	
16	S. S. ...	6	...	C	R	...	
19	T. P. ...	54	...	C	...	D	
20	E. F. ...	...	7	C	R	...	
38	J. C. ...	6	...	D	R	...	
44	S. T. ...	...	6	C	R	...	From overlooked case in house.
45	A. T. ...	3	...	C	R	...	,, ,,
46	M. W....	...	2	C	R	...	
57	H. L. ...	...	13	C	R	...	
61	N. W....	...	3	C	R	...	
74	A. E. C.	...	7	D	R	...	
88	J. S. ...	5	...	C	.	D	
92	E. L. ...	...	3	D	R	...	
93	F. W. ...	...	13	C	R	...	
94	C. B. ...	3		C	R	...	
99	W. P. .	...	7	C	...	D	
103	W. M....	28	...	C	..	D	
104	R. B. ...	...	33	C	R	...	
106	E. A. ...	4	...	H	...	D	
110	E. B. ...	...	4	C	...	D	
112	A. B. ...	...	2	D	R	...	Vaccinated day of admission to Hospital.
114	A. N. ...	...	5	C	R	...	
115	S. N. ...	...	2	C	R	..	
116	S. C. ...	4	...	D	R	...	
129	E. J. L.	...	10	C	R	...	
134	A. P. ...	...	4	D	R	...	

(*b*) Influence of Primary Vaccination in Preventing Severe Smallpox.—The cases of Smallpox have been divided into four classes according as they were : Trivial, Discrete, Confluent, and Hæmorrhagic.

These are classified into the vaccinated and unvaccinated in Table H, which shows that whereas in the Borough 15 per cent. of the cases were *Trivial*, among the vaccinated 20·7 per cent. of the cases were of this character, while none of the cases among the unvaccinated could be so described. In the same way the *Discrete* cases formed 47 per cent. of the total number of cases, 54 per cent. of the vaccinated cases, and 27 per cent. of the unvaccinated cases. Thus the two milder forms largely predominate among the vaccinated cases. The *Confluent cases*, however, which form 32 per cent. of the total cases, form 21 per cent. of the vaccinated cases, and no less that 63 per cent. of the unvaccinated cases. The Hæmorrhagic cases form 4 per cent. of the total cases, 3 per cent. of the vaccinated cases, and 8 per cent. of the unvaccinated cases.

This table conclusively shows that so far as this particular epidemic is concerned the vaccinated cases have suffered, in a very marked degree, much less severely than the unvaccinated.

(*c*) Influence of Primary Vaccination on fatal Smallpox.—In Table E above referred to, the cases and deaths from Smallpox are divided into the vaccinated and unvaccinated.

It is there shown that 17·5 per cent. of the total cases died, and that whereas 12·8 per cent. of the vaccinated cases died, and this includes every case which could in any way be described as vaccinated, no less than 30·5 per cent.

of the cases among the unvaccinated died. It is true that the bulk of the deaths of the unvaccinated were children, but at the same age periods the advantage to the vaccinated is still more marked, as will be readily seen by a glance at the table.

Table L.

List of Persons attacked by Smallpox between the ages of 10 and 15 Years.

No.	Name.	Age.		Vaccination Marks.	Unvaccinated.	Results.		Character of Case.	Remarks.
		M.	F.			R.	D.		
11	L. R. ...	...	13	...	Unvaccinated	R	...	C	Unsuccessfully vaccinated when a child.
15	M. S. ...	...	12	...	Unvaccinated	R	...	C	
18	E. W. ...	12	...	2 G	.....	R	...	D	
41	E. L. ...	..	13	1 G	.....	R	...	D	
50	A. B. ...	...	14	2	.....	R	...	D	
57	H. L. ...	...	13	...	Unvaccinated	R	...	C	
78	M. W...	...	13	When a child	.....	R	...	T	
93	F. W....	...	13	...	Unvaccinated	R	...	C	
96	S. W. ...	...	11	1 mark	.....	R	...	D	
129	E. J. L.	...	10	...	Unvaccinated	R	...	C	
111	E. B. ...	...	10	3 marks	.....	R	...	D	

Influence of Vaccination performed after exposure to infection.—In 62 instances primary vaccination was performed on persons after exposure to infection of Smallpox. Of these 8 or 13 per cent. acquired the disease. The particulars are set out in Table G, from which it will be seen that no case of Smallpox occurred among those vaccinated on the same day, one day after, or two days after exposure,

although these form 68 per cent. of the whole. One-fourth of those vaccinated on the third day after infection, and one-half of those vaccinated on the fourth day after infection, acquired the disease, and that two-thirds of those vaccinated at later dates also acquired Smallpox.

Table M.

List of Persons attacked by Smallpox under 10 Years of age.

No.	Name.	Age.		Vaccination Marks.	Unvaccinated.	Results.		Character of Case.
		M.	F.			R.	D.	
3	G. L.	3 m'ths	...	.....	Unvaccinated	...	D	C
5	E. T.	...	4	.....	do	R	...	D
7	M. G.	...	7	3 G	.....	R	...	D
8	J. C.	7	...	.....	Unvaccinated	...	D	D
10	S. B.	6	...	.. ..	do	...	D	H
12	W. O.	1	...	.....	do	...	D	C
55	T. O.	5	...	Vaccinated 4 days after infection.	.....	...	D	C
56	F. O.	3	...	do	.....	...	D	C
13	A. K.	...	6	.....	Unvaccinated	R	...	D
14	G. L.	...	4	.....	do	R	...	D
16	S. S.	6	...	.....	do	R	...	C
20	E. F.	...	7	.. ...	do	R	...	C
38	J. C.	6	...	.....	do	R	...	D
44	S. T.	..	6	.....	do	R	...	C
45	A. T.	3	..	... ..	do	R	...	C
46	M. W.	...	2	.....	do	R	...	C
82	N. C.	...	9	Vaccinated 3 days after infection.	.....	R	...	D
83	E. C.	...	5	do	.....	R	...	D
84	J. C.	4	...	do	.....	R	...	D
53	B. W.	...	10 m'ths	Vaccinated 7 days after infection.	.....	R	...	T
61	N. W.	...	3	.....	Unvaccinated	R	...	C
74	A. E. C.	...	7	.....	do	R	...	D
88	J. S.	5		.....	do	...	D	C
92	E. L.	..	3	.....	do	R	...	D
99	W. P.	..	7	.....	do	...	D	C
106	E. A.	...	4	.....	do	...	D	H
110	E. B.	...	4	.....	do	...	D	C
112	A. B.	...	2	.....	do	R	...	D
114	A. N.	...	5	.....	do	R	...	C
115	S. N.	...	2	.....	do	R	...	C
116	S. C.	4	...	.....	do	R	...	D
120	V. C.	...	7	When a child	.....	R	...	T
94	C. B.	3	...	.....	Unvaccinated	R	...	C
133	H. P.	...	6	Vaccinated 9 days after infection.	.....	R	...	C
134	A. P.	...	4	.....	Unvaccinated	R	...	D

This confirms the view already held, that vaccination after exposure to infection should be done in the first three days, counting the day of exposure ; and that after the fifth day it is of very little use as a preventive, although it seems to have an effect even then in minimising the severity of the attack.

Influence of Re-Vaccination in preventing Small-pox.—So far as the epidemic under notice is concerned, I have found the effect of re-vaccination in preventing Small-pox absolute.

It is true that in Tables F and G two cases of Smallpox among the re-vaccinated are mentioned, but a glance at Table J, which gives the particulars of these cases, will satisfy anyone that these cases should not properly be included among the re-vaccinated, as in one case the re-vaccination was unsuccessful, and the other was only re-vaccinated a very few hours before the erruption of Smallpox (quite a trivial case) appeared.

In all 18 persons who had previously had Smallpox, and 135 re-vaccinated persons were known to have been exposed to infection, in addition to the staff of the department and hospitals, numbering 30 persons in all, and of these 165 re-vaccinated persons not one took Smallpox. Facts so pronounced need no comment ; but it is perhaps worth while to reproduce the Memorandum of the Local Government Board respecting re-vaccination which was issued in March, 1888 :—

MEMORANDUM ON RE-VACCINATION.

The protection against Smallpox conferred by vaccination in infancy becomes diminished as age advances, and the protection against attack appears to more rapidly diminish than the protection against death by the disease. Even before puberty a portion of the original protection is often lost; and this is particularly the case when the vaccination in infancy has been incomplete, having produced one vesicle instead of several, small vesicles instead of large.

Before vaccination was discovered, Smallpox was for the most part a disease of children. Among the unvaccinated members of a community it is so to this day. But among vaccinated people, owing to the protection of the children and the decline of this protection as life advances, such Smallpox as now prevails is principally seen in adolescents and adults.

Thus it is of importance that the protection which vaccination affords to children should be renewed for them as they are growing up; and the law has provided gratuitous re-vaccination by public vaccinators for every one on reaching the age of 12 years who has not before been successfully re-vaccinated.

A properly performed re-vaccination gives a second measure of protection at least equal to the first. Whether the protective influence of this second vaccination becomes impaired, and, if so, under what conditions, is not known.

Evidence of the additional protection against Smallpox given by a re-vaccination can be found abundantly by anyone who chooses to seek for it. It can be got from the experience of re-vaccinated communities living in the midst of communities not re-vaccinated, as in the case of the permanent officials of the postal service living in London; or it can be got from the experience of nations, differing in their Smallpox death-rates as their laws for re-vaccination differ; witness the contrast between the German and Austrian rates of Smallpox mortality since the time when Germany, but not Austria, enforced re-vaccination upon children of school ages. Or evidence to the same effect is to be had by observing the immunity from Smallpox, for year after year, secured to nurses in Smallpox hospitals by re-vaccinating them before entering on their service. This last is perhaps the most obvious of all such examples; and in the few instances where there has seemed to be exception to the rule of their immunity is has almost always turned out that the requisite re-vaccination has been by some chance omitted.

The re-vaccination which is proper to be done for every child ought to be a matter of regular system; done as regularly, if it were to be wished, as primary vaccinations are done for infants. There should be no waiting until an alarm about Smallpox is raised. The importance of these considerations will be obvious to anyone who considers the conditions for the proper performance of re-vaccination. The lymph has to be obtained from cases of primary vaccination; it must not be taken from cases of re-vaccination; it ought to be used in the freshest possible state, and, whenever practicable, direct from the primary vaccine vesicle. With such lymph at least 96 per cent. of re-vaccinations ought to be successful in the sense of producing the best local result that the individual can obtain, and of giving him his full measure of additional security against Smallpox.

If, on the other hand, people will defer re-vaccination until there is actual alarm of Smallpox, and multitudes then present themselves for the operation at one and the same time, they must remember that the vaccinator has a first duty to infants whom the law requires to be vaccinated, and that he may at that particular moment be without lymph for re-vaccinations. Or, alternatively, the applicants may have to be re-vaccinated with stored lymph, and then failures and uncertain results are likely to ensue; in the hands of some practitioners, indeed, as many as a third of the attempts at re-vaccination with such lymph have proved unsuccessful. And this disappointment in obtaining proper vaccination will be encountered just at the time when it is of special importance that the applicants should have the full measure of protection that vaccination and re-vaccination can give.

Medical and sanitary officers and the medical profession generally are therefore invited to urge upon parents and guardians the importance of having their children re-vaccinated at the age of 12 years or thereabouts, and to urge upon all persons beyond this age who have not yet been successfully re-vaccinated the duty of obtaining for themselves the additional protection which may be had by this means.

GEORGE BEUCHANAN,
Medical Officer.

Local Government Board,
Medical Department, March, 1888.

Public vaccinators are authorised to afford re-vaccination gratuitously to all persons over 12 years of age who have not previously been successfully re-vaccinated. Under circumstances of exceptional danger from Smallpox they have authority, if they see fit, to re-vaccinate applicants over 10 years of age.

Table N.

Showing relation of Secondary cases to date of removal of first case.

First case removed to Hospital on day from eruption.	No. of Persons left in House.	No. Contracted Smallpox.	Percentage.
Same day	114	1	0·8
1 day after	142	8	5·7
2 days after	87	10	11·4
3 ,, ...	37	3	8·1
4 ,, ...	6	1	16·6
5 ,, ...	11	3	27·2
14 ,, ...	5	1	20·0
26 ,, ...	4	2	50·0
*1st case not removed	15	3	20·0
Totals	421	32	7·6

* 1 case died before removal was possible. Four other trivial cases could not be removed.

Influence of time of removal of first cases on subsequent infection.—In Table N I have set out particulars of the secondary cases occurring among those exposed to infection where the cases were removed on the day of the appearance of the eruption and on the various days afterwards.

From this it will be seen that the percentage of the persons exposed, who were afterwards attacked by the disease, increased steadily as the delay in removing the first case was longer.

This leaves the question of vaccination out of sight, but it shows the very great importance of prompt reporting and speedy removal of all cases of Smallpox as an auxiliary to vaccination in preventing the spread of the disease.

At the same time it must not be forgotten that the cases were removed on the same day as that on which they were notified, and in those instances where early notification took place early vaccination and re-vaccination was also performed, so that these cases had the benefit both of early vaccination or re-vaccination, and also a shorter exposure to infection.

Table VI.

SCARLET FEVER.

Ages	Cases.	Deaths.	
		Total.	Percentage.
Under 5 years	96	15	15·6
5 to 10	84	...	...
10 to 15...	21	...	...
15 to 25...	10	...	...
25 to 35	4	...	...
35 to 45...	1	...	...
45 to 55...	...	...	...
Over 55	...	...	...
Total	216	15	6·9

SCARLET FEVER.

There were 216 cases of Scarlet Fever notified during 1895, and among these 15 deaths occurred, giving a death-rate of 6·9 per cent. In 1894 the nnmber of cases was 264, and the death-rate 7·9 per cent., so that there has been a slight diminution both in the number of cases and in the mortality. The average number of cases notified in the preceding five years was 386.

The cases were spread over the whole year, the first three months of the year having the least and August and October the greatest number of cases. At no time did anything approaching a severe epidemic threaten, and the attacks were generally of a very mild character.

With regard to age, the accompanying table shows that 83 per cent. of the cases occurred in children under 10 years of age, and more than half of these among children under five.

Cases occurred in each of the 12 Wards of the borough, Clarksfield and Waterhead Wards suffering most and Hollinwood Ward the least.

Westhulme Hospital was open for the reception of Scarlet Fever cases during the whole year, 65 cases being isolated in the Hospital, or 30 per cent. of the whole.

DIPHTHERIA.

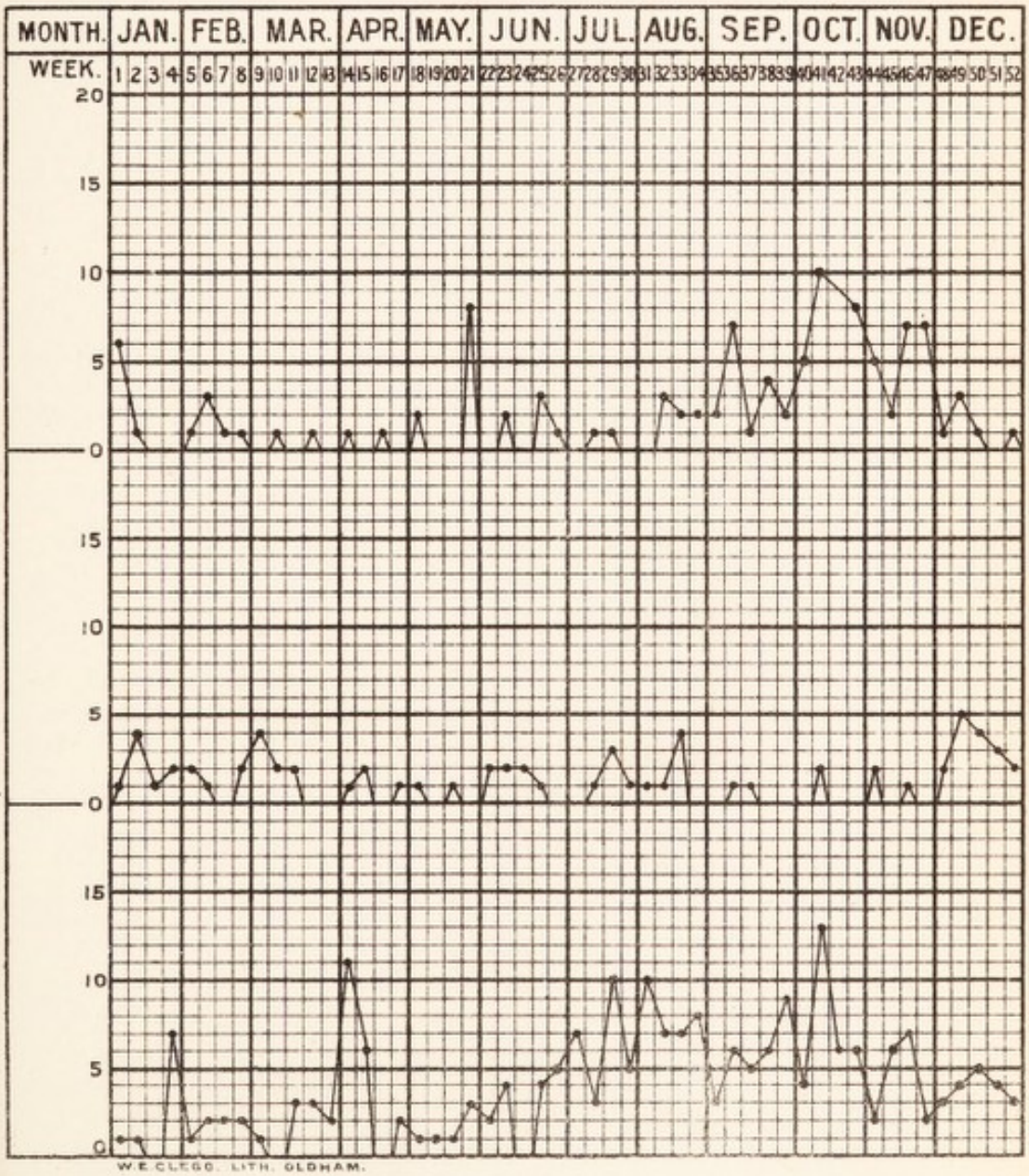
There were 70 cases notified during 1895, and 28 of these died, giving the extremely high death-rate of 40 per cent. of the cases.

In 1894 there were 67 cases, with a death-rate of 53 per per cent., so that, although the number of cases remain

BOROUGH OF OLDHAM.

CASES OF INFECTIOUS DISEASE

Notified during the year 1895.



about the same, the fatality is less. In 1893 there were 25 cases, with a death-rate of 64 per cent.; and in 1892, 27 cases, with a death-rate of 66 per cent.

Table VII.

DIPHTHERIA.

Ages.	Cases.	Deaths.	
		Total.	Percentage.
Under 5 years	38	20	52·6
5 to 10	19	7	36·8
10 to 15	2	1	50·0
15 to 25	5	...	...
25 to 35	3	...	...
35 to 45	...	...	...
45 to 55	2	...	...
Over 55	1	...	...
Total	70	28	40·0

This would seem to show that the number of cases is increasing, while the relatively fatality is less. I am inclined to the opinion, however, that this is owing to the relatively greater proportion of cases which are notified. I am afraid that a large proportion of the milder cases are still overlooked; but at the same time it is satisfactory to find that Oldham is not suffering from the marked increase in this disease which has shown itself in London and other large towns.

Table IX.

TYPHOID OR ENTERIC FEVER.

Ages.	Cases.	Deaths.	
		Total.	Percentage
Under 5 years ...	5	1	20·0
5 to 10...	14	1	7·1
10 to 15	19	1	5·3
15 to 25...	32	11	34·4
25 to 35...	19	2	10·5
35 to 45...	11	7	63·6
45 to 55...	7	2	28·6
Over 55	2	...	...
Total	109	25	22·9

ENTERIC OR TYPHOID FEVER.

There were 109 cases of this disease notified during 1895, and of these 25, or 22·9 per cent., died. In 1894 there were 69 cases, with 17 deaths; in 1893, 70 cases with 26 deaths; and in 1892, 83 cases with 16 deaths.

Thirty-nine cases, or 35 per cent. of the total number were isolated by removal to Westhulme Hospital, and 10 of these died, against 15 removals with three deaths last year.

The cases of this disease which are removal to the Hospital are almost exclusively those of a severe type, and these, in most instances, are not removed until their friends have become unable to nurse them, generally about the end of the second week of the disease.

PUERPERAL FEVER.

During the year 1895 five cases of Puerperal Fever were notified, and eight deaths from this disease were registered.

There are several difficulties in the way of obtaining satisfactory notification of this disease. One is the fear on the part of the medical attendant that the friends of the patient may hold him somewhat to blame if Puerperal Fever occurs, the public generally having the idea that this disease is caused by want of care on the part of those attending the labour. Then again, it is somewhat difficult to define exactly what is meant by Puerperal Fever. For the purposes of the Notification Act it may reasonably be made to include all diseases of a septic origin occurring after labour, such as Puerperal Peritonitis, Puerperal Septicaemia, Puerperal Pyaemia, &c., &c. This want of definiteness in the general meaning of the term "Puerperal Fever" is generally taken advantage of by the medical practitioners to escape the somewhat unpleasant duty of reporting cases of this disease. This is unfortunate, as this disease, more than most, depends on the deleterious influence of insanitary surroundings; and it would be both of great advantage to the patient for the time being, and for the residents of the house afterwards, to have the premises thoroughly overhauled and sanitary defects discovered and removed. Again, the more general notification of these cases would of itself in time remove the feeling of the public in this matter, as they would find that the cause is not necessarily such as they anticipate, and there is no doubt that the careful disinfection of every thing connected with nurse and patients would be a great safeguard against the spread of the disease by direct infection.

Measures taken to prevent the spread of Infectious Disease.

Isolation.—With four exceptions, as shown above, the whole of the Smallpox cases were removed to the various Hospitals. Ninety-four were sent to Moscow Farm, 30 to the Cinder Hill Hospital belonging to the combined Hospital Board for Chadderton, Royton, and Crompton, and 8 trivial cases were removed to Westhulme at a time when the epidemic was at its height and the other Hospitals were full. Convalescents from Cinder Hill and Moscow were also for a time brought down to the Westhulme Hospital, and it is satisfactory to note that, although cases of Scarlet Fever were being treated in an adjoining building, not one acquired the disease.

The Moscow Farm Hospital was made to hold 20 patients, although this meant some overcrowding. Cinder Hill Hospital has accommodation for some 20 to 25 patients.

On the 26th of June a special meeting of the Sanitary Committee was held to consider the circumstances of the epidemic. It was at that time quite evident that unless the epidemic rapidly subsided, the Hospital accommodation available would be quite inadequate to meet the emergency without utilising Westhulme, and this the Committee were most unwilling to do, as the use of Westhulme for Smallpox in the past has been so unfortunate for the surrounding thickly populated portion of both Oldham and Chadderton. (*Vide* report for 1894). The Committee decided to erect further accommodation, and a corrugated iron hospital to accommodate 48 patients, with a separate nurse's home, was purchased, and on the 29th the work of putting in the foundations was commenced on land adjoining the Moscow

Farm Hospital, already in the occupation of the Committee. Unfortunately, the Moscow Farm is situated in the Saddleworth Rural Sanitary District, and as we had committed an offence against their Building Bye-laws by commencing building operations without submitting plans, they served us with notice to pull down the new structure. This occurred when the shell of the building was almost complete, namely, in about a fortnight from the commencement of operations. A deputation from the Oldham Corporation then waited upon the Saddleworth Council, and laid before them the urgent need for the hospital, the suitability of the site—which had only two habitations within a quarter of a mile from it, and no amount of property within a mile,—also the fact that the Moscow Farm had been used as a Smallpox Hospital for from two to three years, and they offered to give a guarantee to remove all the temporary buildings as soon as the present emergency had passed. The Saddleworth Authority, however, would not listen to this appeal, and decided that the buildings must be removed and the Corporation prosecuted.

The buildings were at once pulled down and another site procured just inside the Oldham boundary, half a mile from the previous one, and the hospital was erected on this new site, but in a more leisurely manner, much of the work being made of a permanent character, as the epidemic was declining and the present need of further accommodation had passed.

The Saddleworth Council, notwithstanding the prompt removal of the buildings, pressed their prosecution and applied for severe penalties, but were only very partially successful, as the Bench only imposed a fine of twenty shillings.

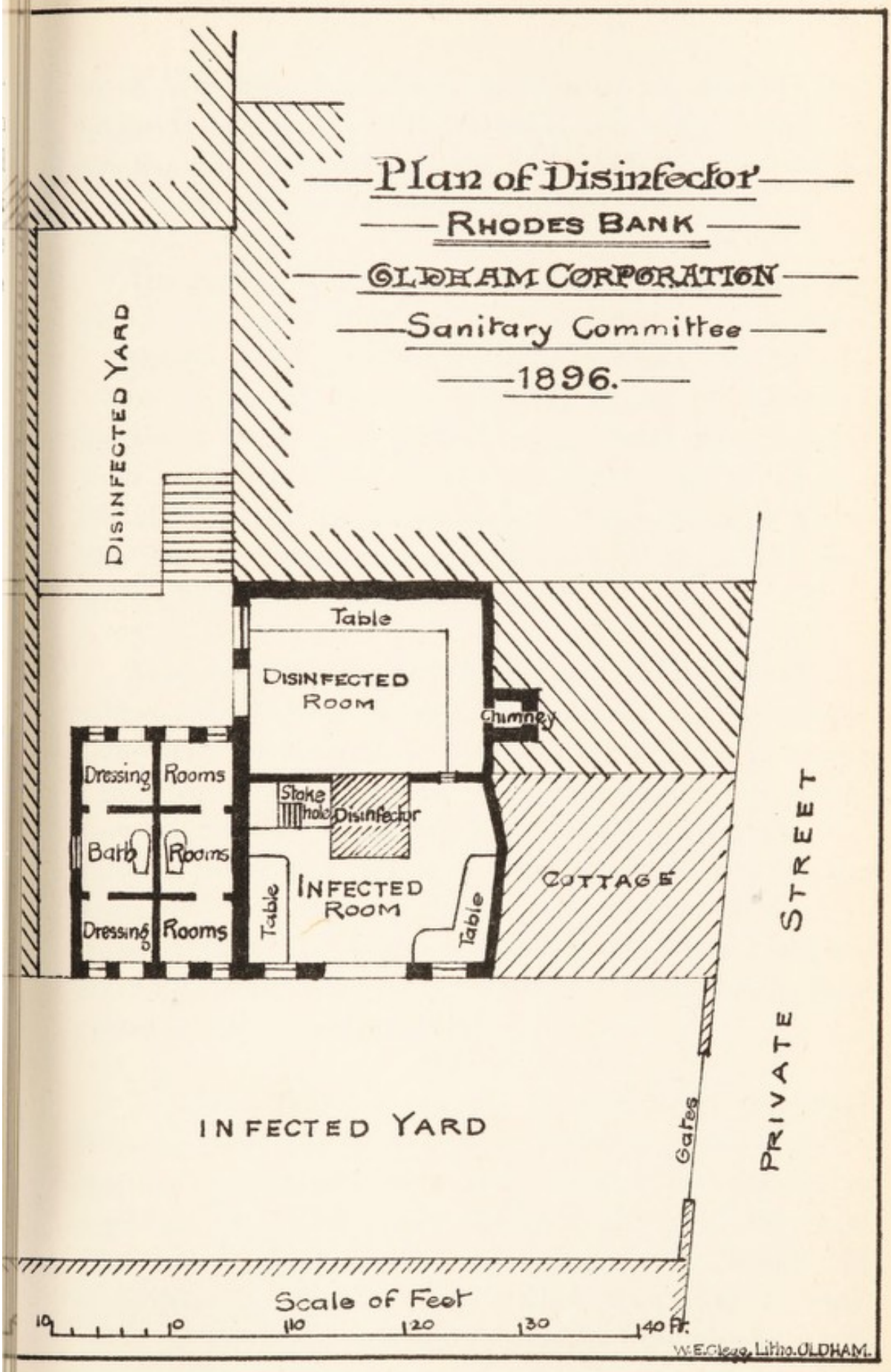
The ultimate result of this unfriendly action has, however, been beneficial, as a superior site within the borough boundary has been obtained, and buildings have been erected which will form the nucleus of a permanent Smallpox Hospital, which has become an absolute necessity for the town since, under present conditions, it appears probable that Smallpox will never be long absent.

Forty-one cases of Enteric Fever, and 67 of Scarlet Fever were isolated at Westhulme Hospital, and under an arrangement which was made with the Guardians to take their infectious cases, 18 patients suffering from Measles were admitted from the Workhouse.

Isolation of cases of Infectious Disease in their own homes is of necessity very imperfect in Oldham where the great bulk of the houses do not contain more than four rooms; larger numbers of them in fact not having so many. Consequently, until a much greater proportion of cases are removed to the Hospital, its full benefit in preventing the spread of disease will not be obtained.

Disinfection.—The houses are fumigated by burning sulphur; the walls are stripped and notices served for cleansing after cases of any of the notifiable diseases, after deaths from Phthisis, and, when requested, after cases of Influenza and Measles.

All Typhoid excreta are received into special pails, and burnt at the Destructor. Disinfecting powder, fluid, and soap are distributed freely at the houses where Infectious Diseases occur. The drains in all cases of Enteric Fever, Diphtheria, and Puerperal Fever are tested with the smoke machine.


Plan of Disinfector
RHODES BANK
OLDHAM CORPORATION
Sanitary Committee
1896.
DISINFECTED YARD
Table
DISINFECTED ROOM
Chimney
Dressing Rooms
Stoke hole
Disinfector
Bath Rooms
Table
INFECTED ROOM
Table
Dressing Rooms
COTTAGE
PRIVATE STREET
INFECTED YARD
Gates
Scale of Feet
10 10 110 120 130 140 Ft.
W.E.Clegg, Litho. OLDHAM.

A new Steam Disinfector, with baths, has been erected at the Health Yard at Rhodes Bank, and was examined by the Sanitary Committee on the 28th of March, since which date it has been in continuous operation.

The general arrangement is shown on the accompanying plan. Clothes, bedding &c., are brought in one van to the "infected yard," passed through the Steam Disinfector, which is one of Messrs. Goddard, Massey & Warner's machines, working at 20lbs. pressure, and then removed from the Disinfected Yard in another van. In the Disinfector they are subjected to a temperature of about 260 degrees Farenheit, and afterwards dried, so that they are ready for use as soon as returned.

In all cases of Smallpox, in addition to fumigating the houses, disinfecting all bedding, clothing, &c., the people themselves are brought to the yard, where they enter the "infected yard," pass into the dressing room, and while they have a bath, their clothes are passed through the Disinfector, and then taken to the dressing room on the Disinfected side from which they pass out through the Disinfected yard. In the nine months the plant has been working persons have been bathed and their clothes disinfected in the manner described.

To make this arrangement complete, the bath and dressing rooms require to be more perfectly warmed, and a waiting room for each side should be provided, as the various members of a family, and indeed it has often happened that two or three families, come down to be bathed and disinfected at the same time. They then have to wait, often in the rain; and several persons have caught severe colds, which might have ended seriously.

As further improvements in our methods of dealing with Infectious Disease, I would suggest :—

(1) The advisability of substituting the sulphur fumigation by spraying with a solution of Corrosive Sublimate. This is an undoubtedly more thorough method of disinfecting, as the value of sulphur fumigation is doubtful.

(2) The provision of a furnished cottage, to which a family might be removed for a night when necessary to allow time for the thorough disinfection of their own house; and

(3) The provision of accommodation for placing families exposed to Smallpox infection under quarantine; and another useful measure would be to agree to refund any loss of wages to persons re-vaccinated after exposure to Smallpox.

I am afraid that the acquirement of compulsory powers to compel the vaccination and re-vaccination of all persons known to have been exposed to the infection of Smallpox, which would prove of the greatest value as shown earlier in this report, is for the present impossible; but I hope that Parliament may in time give us these powers. In the meantime we do all that we can to persuade the persons concerned to carry out these measures.

In addition to disinfection, isolation, and (where possible in Smallpox) vaccination and re-vaccination, other measures have been taken to warn the public of the dangers of Infectious Disease; the placards, leaflets, and circulars reproduced in the Appendix were issued from time to time.

It was also found necessary to close two schools for a period of three weeks on account of Measles, a measure which was attended with greater success than was anticipated

WESTHULME AND MOSCOW FARM HOSPITALS.

During the year, as above stated, these Hospitals have been open for the reception of cases of Smallpox, Scarlet Fever, Enteric Fever and, in certain instances, for Measles.

The Moscow Farm Hospital has been kept entirely for Smallpox, and, except for a short time at the height of the epidemic, no cases of Smallpox have been treated at Westhulme.

The actual number of cases admitted was: to Westhulme, 134; and to Moscow, 94.

The Westhulme cases are made up as follows:—Scarlet Fever, 67 cases with 5 deaths; Enteric Fever, 41 cases with 10 deaths; Measles, 18 cases with five deaths; and Smallpox, eight cases.

STAFF.—For working the two Hospitals, Miss Whitehead, the Matron, has had the assistance of seven nurses, two porters and six servants, and the work at each Hospital has been carried out in a thoroughly efficient and satisfactory manner.

As pointed out earlier in this report, the Westhulme Hospital is not used to the extent it might be with great advantage to the town, and anything which would make it more popular would be of great service. At present it consists of very bare uninviting buildings placed in the middle of a piece of waste land, and surrounded by a

wooden palisade. The old wooden buildings which form about half the accommodation of the Hospital are becoming worn out, and in severe weather it is found difficult to keep the Wards at a satisfactory temperature. I hope that the Committee will, before long, see their way to enclose with a permanent fence and lay out in an attractive manner the whole of the land belonging to them, and to replace the old wooden buildings with modern structures of permanent materials.

Now that provision for Smallpox has been made elsewhere, there can be no longer any objection to placing the Hospital on a permanent footing, as it will always be required, and might be made available also for the isolation of cases from the surrounding districts.

PARTICULARS OF SMALLPOX CASES.

No.	Sex.	Age.	Date of Appearance of Rash.	When Vaccinated.	Unvaccinated	Character of Attack.	Days Duration.	Result.
1	F	31 years	May 14	...	Yes	Hæmorrhagic	37	Cured
2	M	27 „	„ 14	In childhood	...	Discrete	40	Cured
3	M	3 months	„ 26	...	Yes	Confluent	9	Died
4	M	32 years	„ 28	In childhood	...	Hæmorrhagic	13	Died
5	F	4 „	June 6	...	Yes	Discrete	28	Cured
6	F	33 „	„ 7	In childhood	...	Discrete	27	Cured
7	F	7 „	„ 9	In childhood	...	Discrete	25	Cured
8	M	7 „	„ 18	...	Yes	Discrete	13	Died
9	M	16 „	„ 20	In childhood	...	Discrete	22	Cured
10	M	6 „	„ 20	...	Yes	Hæmorrhagic	1	Died
11	F	13 „	„ 20	...	Yes	Confluent	59	Cured
12	M	16 months	„ 21	...	Yes	Confluent	12	Died
13	F	6 years	„ 21	...	Yes	Discrete	28	Cured
14	F	4 „	„ 19	...	Yes	Discrete	30	Cured
15	F	12 „	„ 21	...	Yes	Discrete	37	Cured
16	M	6 „	„ 22	...	Yes	Confluent	33	Cured
17	F	34 „	„ 21	...	Yes	Discrete	23	Cured
18	M	12 „	„ 20	In childhood	...	Discrete	22	Cured
19	M	54 „	„ 22	...	Yes	Confluent	10	Died
20	F	7 „	„ 22	...	Yes	Confluent	41	Cured
21	M	59 „	„ 23	In childhood	...	Hæmorrhagic	28	Cured
22	F	52 „	„ 24	In childhood	...	Discrete	20	Cured
23	M	48 „	„ 24	In childhood	...	Discrete	27	Cured
24	F	37 „	„ 23	In childhood	...	Confluent	54	Cured
25	F	26 „	„ 21	In childhood	...	Confluent	12	Died
26	F	23 „	„ 23	In childhood	...	Trivial	11	Cured
27	F	28 „	„ 22	In childhood	...	Trivial	22	Cured

PARTICULARS OF SMALLPOX CASES.—Continued.

No.	Sex.	Age.	Date of Appearance of Rash.	When Vaccinated.	Unvaccinated	Character of Attack.	Days Duration.	Result.
28	M	43 years	June 25	In childhood	...	Confluent	37	Cured
29	F	42 „	„ 23	In childhood	...	Trivial	16	Cured
30	F	24 „	...	In childhood	...	Discrete	30	Cured
31	M	31 „	„ 22	In childhood	...	Trivial	15	Cured
32	M	16 „	„ 28	In childhood	...	Trivial	13	Cured
33	F	59 „	July 2	In childhood	...	Confluent	43	Cured
34	F	21 „	„ 1	In childhood	...	Discrete	25	Cured
35	F	32 „	„ 2	In childhood	...	Trivial	19	Cured
36	F	50 „	„ 6	In childhood	...	Trivial	15	Cured
37	F	21 „	„ 6	In childhood	...	Discrete	15	Cured
38	M	6 „	„ 7	...	Yes	Discrete	33	Cured
39	M	29 „	„ 8	In childhood	...	Discrete	20	Cured
40	F	34 „	„ 9	In childhood	...	Trivial	12	Cured
41	F	13 „	„ 7	In childhood	...	Discrete	23	Cured
42	M	37 „	„ 10	In childhood	...	Confluent	22	Cured
43	F	31 „	June 14	In childhood	...	Discrete	46	Cured
44	F	6 „	July 4	...	Yes	Confluent	44	Cured
45	M	3 „	„ 3	...	Yes	Confluent	27	Cured
46	F	2½ „	„ 8	...	Yes	Semi-Confluent	32	Cured
47	F	24 „	„ 10	In childhood	...	Discrete	13	Cured
48	F	48 „	„ 8	In childhood	...	Confluent	22	Cured
49	M	47 „	„ 10	In childhood	...	Confluent	25	Cured
50	F	14 „	June 27	In childhood	...	Discrete	50	Cured
51	F	26 „	July 11	In childhood	...	Discrete	35	Cured
52	F	28 „	„ 10	In childhood	...	Trivial	15	Cured
53	F	10 months	„ 1	June 25	...	Trivial	13	Cured
54	M	27 years	„ 12	In childhood	...	Discrete	14	Cured
55	M	5 „	„ 15	July 6	...	Confluent	26	Died

PARTICULARS OF SMALLPOX CASES.—Continued.

No.	Sex.	Age.	Date of Appearance of Rash.	When Vaccinated.	Unvaccinated	Character of Attack.	Days Duration.	Result.
56	M	3 years	July 15	July 6	...	Confluent	21	Died
57	F	13 „	„ 14	...	Yes	Confluent	36	Cured
58	F	44 „	„ 14	In childhood	...	Discrete	11	Cured
59	F	30 „	„ 15	In childhood	...	Discrete	16	Cured
60	F	18 „	„ 15	In childhood	...	Confluent	50	Died
61	F	3 „	„ 14	...	Yes	Confluent	41	Cured
62	M	19 „	„ 17	In childhood	...	Confluent	42	Cured
63	F	30 „	„ 17	In childhood	...	Discrete	17	Cured
64	M	33 „	„ 18	In childhood	...	Discrete	19	Cured
65	F	42 „	„ 16	In childhood	...	Trivial	30	Cured
66	F	37 „	„ 17	In childhood	...	Discrete	14	Cured
67	F	34 „	„ 19	In childhood	...	Discrete	26	Cured
68	F	18 „	„ 19	In childhood	..	Discrete	12	Cured
69	F	46 „	„ 19	In childhood	...	Confluent	20	Died
70	F	36 „	„ 20	In childhood	...	Trivial	13	Cured
71	F	34 „	„ 20	In childhood	...	Trivial	13	Cured
72	F	32 „	„ 20	In childhood	...	Confluent	5	Died
73	F	27 „	„ 20	In childhood	...	Discrete	17	Cured
74	F	7 „	„ 18	...	Yes	Discrete	22	Cured
75	M	23 „	„ 21	In childhood	...	Trivial	12	Cured
76	F	40 „	„ 19	In childhood	...	Trivial	14	Cured
77	M	36 „	...	In childhood	...	Hæmorrhagic	3	Died
78	F	13 „	July 21	In childhood	...	Trivial	12	Cured
79	M	19 „	„ 20	In childhood	...	Trivial	17	Cured
80	F	21 „	„ 23	In childhood	...	Trivial	10	Cured
81	M	26 „	„ 20	In childhood	...	Confluent	10	Died
82	F	9 „	„ 24	July 13	...	Discrete	16	Cured
83	F	5 „	„ 24	July 13	...	Discrete	16	Cured

PARTICULARS OF SMALLPOX CASES.—Continued.

No.	Sex.	Age.	Date of Appearance of Rash.	When Vaccinated.	Unvaccinated	Character of Attack.	Days Duration.	Result.
84	M	4 years	July 24	July 13	...	Discrete	16	Cured
85	M	30 „	„ 24	In childhood	...	Discrete	18	Cured
86	F	29 „	„ 26	In childhood	...	Semi-Confluent	26	Cured
87	M	46 „	„ 30	In childhood	...	Confluent	12	Died
88	M	5 „	Aug. 1	...	Yes	Confluent	30	Died
89	M	29 „	„ 4	In childhood	...	Discrete	19	Cured
90	F	21 „	„ 4	In childhood	...	Trivial	10	Cured
91	F	39 „	July 30	In childhood	...	Trivial	31	Cured
92	F	3 „	Aug. 6	...	Yes	Discrete	47	Cured
93	F	13 „	„ 7	...	Yes	Confluent	53	Cured
94	M	3 „	„ 5	...	Yes	Confluent	43	Cured
95	M	15 „	„ 9	In childhood	...	Discrete	15	Cured
96	F	11 „	„ 8	In childhood	...	Discrete	14	Cured
97	F	22 „	„ 9	In childhood	...	Discrete	13	Cured
98	F	25 „	„ 10	In childhood	...	Discrete	12	Cured
99	F	7 „	„ 10	...	Yes	Confluent	8	Died
100	M	37 „	„ 10	In childhood	...	Confluent	32	Cured
101	M	29 „	„ 11	In childhood	...	Discrete	20	Cured
102	M	43 „	„ 12	In childhood	...	Confluent	5	Died
103	M	28 „	„ 12	...	Yes	Confluent	6	Died
104	F	33 „	„ 14	...	Yes	Confluent	39	Cured
105	M	29 „	„ 15	In childhood	...	Discrete	17	Cured
106	M	4 „	„ 16	...	Yes	Hæmorrhagic and Confluent	9	Died
107	F	29 „	„ 20	In childhood	...	Discrete	28	Cured
108	M	19 „	„ 19	In childhood	..	Discrete	19	Cured
109	F	33 „	„ 24	In childhood	...	Discrete	24	Cured
110	F	4 „	„ 26	...	Yes	Confluent	20	Died
111	F	10 „	„ 27	In childhood	...	Discrete	21	Cured

PARTICULARS OF SMALLPOX CASES.—Continued.

No.	Sex.	Age.	Date of Appearance of Rash.	When Vaccinated.	Unvaccinated	Character of Attack.	Days Duration.	Result.
112	F	2 years	Aug. 27	...	Yes	Discrete	21	Cured
113	F	41 „	„ 27	In childhood	...	Discrete	19	Cured
114	F	5 „	„ 28	...	Yes	Confluent	32	Cured
115	M	2 „	„ 28	..	Yes	Confluent	32	Cured
116	M	4 „	„ 29	...	Yes	Discrete	31	Cured
117	F	17 „	Sep. 3	In childhood	...	Discrete	19	Cured
118	M	21 „	„ 6	In childhood	...	Discrete	20	Cured
119	M	15 „	„ 8	In childhood	...	Confluent	42	Cured
120	F	7 „	„ 9	In childhood	...	Trivial	15	Cured
121	M	32 „	„ 14	In childhood	...	Confluent	36	Cured
122	M	21 „	„ 14	In childhood	...	Discrete	20	Cured
123	F	30 „	„ 20	In childhood	...	Confluent	14	Died
124	M	28 „	Oct. 11	In childhood	...	Confluent	46	Cured
125	F	24 „	„ 27	In childhood	...	Discrete	18	Cured
126	M	23 „	„ 30	In childhood	...	Discrete	18	Cured
127	M	19 „	„ 30	In childhood	...	Discrete	18	Cured
128	M	22 „	Nov. 6	In childhood	...	Discrete	20	Cured
129	F	10 „	„ 5	...	Yes	Confluent	47	Cured
130	F	34 „	„ 14	In childhood	...	Discrete	21	Cured
131	F	34 „	„ 21	In childhood	...	Discrete	14	Cured
132	M	48 „	„ 23	In childhood	...	Confluent	11	Died
133	F	6 „	Dec. 1	November 27	...	Confluent	60	Cured
134	F	4 „	„ 18	...	Yes	Discrete	43	Cured
135	F	41 „	„ 19	In childhood	...	Confluent	10	Died
136	M	32 „	„ 23	In childhood	...	Discrete	15	Cured
137	M	17 „	„ 22	In childhood	...	Discrete	21	Cured

TABLE No. 12.

Showing the number of Cases of Sickness and the Deaths Registered during the several months of the year 1895 in Oldham.

Months.	Smallpox.		Scarlet Fever.		Diphtheria.		Typhoid Fever.		Puerperal Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January	...	...	9	1	10	3	7	2	...	...
February	...	...	8	1	7	2	6	1	...	...
March	...	...	8	...	4	4	2	...	...	1
April	...	...	20	1	5	2	4	...	...	...
May	4	...	7	...	2	...	8	3	...	...
June	28	3	13	...	6	3	6	2	...	1
July	54	7	29	1	6	2	2	...	...	...
August	30	9	31	2	5	2	9	1	1	2
September	7	2	27	1	2	1	16	1	...	...
October	2	1	30	3	2	1	25	6	1	...
November	7	...	18	4	5	2	19	7	1	2
December	5	1	16	2	16	3	5	3	2	2
Totals	137	23	216	16	70	25	109	26	5	8

Table of Population, Births, and of New Cases of Infectious
year 1895, in the County B

Names of Localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases o knowle	
	Census, 1891.	Estimated to middle of 1895.			Smallpox.	Scarlatina.
St. Mary's	9,031	11,207	335	Under 5	1	4
				5 upwards.	5	6
St. Peter's	11,798	12,750	287	Under 5	...	7
				5 upwards.	6	15
Werneth	11,747	12,836	298	Under 5	...	5
				5 upwards.	7	17
Westwood (H)	11,637	12,443	373	Under 5	3	10
				5 upwards.	8	6
St. Paul's	10,191	11,034	285	Under 5	2	4
				5 upwards.	8	2
Coldhurst	13,688	11,314	332	Under 5	3	11
				5 upwards.	8	14
Hartford	12,679	13,350	366	Under 5	1	6
				5 upwards.	4	2
Hollinwood	7,652	8,360	314	Under 5	...	2
				5 upwards.	...	
Clarksfield	11,615	13,145	365	Under 5	1	25
				5 upwards.	9	21
Mumps	7,733	9,642	224	Under 5	1	8
				5 upwards.	12	12
St. James'	10,735	11,125	308	Under 5	2	4
				5 upwards.	25	8
Waterhead	12,957	13,873	386	Under 5	4	10
				5 upwards.	27	17
Totals	131,463	141,079	3,873	Under 5	18	96
				5 upwards.	119	120
			Grand	Total	137	216

.

o the knowledge of the Medical Officer of Health, during the
; classified according to Diseases,
s.

cality, coming to the Officer of Health.			Number of such Cases removed from their homes in the several localities for treatment in Isolation Hospital.						
Fevers.		Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.	Fevers.			Erysipelas.
Enteric or Typhoid.	Puerperal.					Typhus.	Enteric or Typhoid.	Puerperal.	
...	...	...	1	3	...	...	...	...	...
7	1	...	6	1	...	...	4	...	...
1	...	...	...	1	...	...	1	...	...
9	...	...	5	2	...	...	1	...	...
...	...	...	...	1	...	...	...	...	...
4	...	...	6	4	...	...	1	...	...
1	...	...	3	4	...	...	...	...	...
13	...	...	8	6	...	...	5	...	...
1	...	...	2	3	...	...	...	...	...
8	1	...	8	1	...	...	6	...	...
...	...	...	3	5	...	...	...	...	...
18	...	...	8	6	...	...	8	...	...
...	...	...	1	...	...	...	...	...	...
6	...	...	4	...	...	...	3	...	...
...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	4	...	...
2	...	...	1	5	...	...	...	...	...
9	1	...	9	2	...	...	1	...	...
...	...	...	1	3	...	...	...	...	...
4	1	...	11	8	...	...	3	...	...
...	...	...	2	...	...	...	...	...	...
14	...	...	25	2	...	...	1	...	...
...	...	...	4	4	...	...	...	...	...
7	1	...	24	4	...	...	1	...	...
5	...	...	18	29	...	...	1	...	...
104	5	...	114	36	...	...	38	...	...
109	5	...	132	65	..	...	39	...	...

SUMMARY OF CASES ADMITTED INTO W

	1880		1881		1882		1883		1884		1885	
	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died
Smallpox.....	5	...	39	9	18	2	6	...	2	...	5	...
Measles	2	...	...	...	2	...	1	...	5	...	...	...
Scarlet Fever ...	73	12	60	15	30	2	91	3	111	10	90	8
Diphtheria	...	...	2	1	...	...	...	...	...	...	..	...
Typhus	...	...	1	1	.	...	...	...	1	...	...	...
Typhoid Fever .	28	5	56	8	29	4	32	7	36	4	31	7
Simple Continued Fever .	2	...	4	1	2	...	...	..	...	...	1	.
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	5	1	4	2	1	...
Ill-defined	...		...	...	...	...	...	...	6	0	4	3
	110	17	162	35	81	8	135	11	165	16	132	18

. 15.

SPITAL DURING THE YEARS 1880 TO 1895.

887		1888		1889		1890		1891		1892		1893		1894		1895	
	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died
3	...	123	16	1	...	...	...	...	...	136	16	638	63	28	1	8	...
1	1	...	...	...	...	3	...	...	...	1	...	...	...	...	...	18	5
1	27	203	8	222	13	134	7	81	4	246	15	...	...	20	2	67*	5
.	...	...	...	...	.	...	...	...	...	1	...	...	...	...	...	...	...
2	1	...	...	..	...	1	...	...	...	1	...	...	...	..	...	...	...
0	6	23	7	12	5	28	5	46	10	12	2	...	.	15	3	41†	10
	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	1	...	...	...	...	...	...	...	...	...	...	...	...	. .	...	...	...
1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
.	...	4	...	1	..	...	...	1	...	...	...	...	.	...	...	...	...
9	36	354	31	236	18	166	12	128	14	397	33	638	63	63	6	134	20

* Two of these were from Out-Townships. † Two of these were from Out-Townships.

TABLE No. 14.

Showing the number of new Cases of Sickness coming to the knowledge of the Medical Officer of Health during the years 1881 to 1895.

Year.	Small-pox.	Scarlet Fever.	Diph-theria.	Typhus Fever.	Typhoid Fever.	Puer-peral Fever.	Total Cases.
1881	15	434	20	...	131	3	603
1882	13	465	27	...	117	3	625
1883	6	301	15	...	96	3	421
1884	2	289	20	1	100	...	412
1885	4	229	28	...	58	2	321
1886	5	391	44	12	100	7	559
1887	3	1,775	127	2	119	5	2,031
1888	104	985	86	...	106	3	1,284
1889	1	680	39	...	56	5	781
1890	...	320	11	2	63	7	403
1891	...	238	29	...	112	4	383
1892	75	667	27	...	83	9	861
1893	416	442	25	...	70	9	962
1894	165	264	67	...	69	9	574
1895	137	216	70	...	109	5	537

TABLE No. 16.

Smallpox Hospitals, 1895.

	Cases Admitted.	Discharged.	Died.
Westhulme Hospital	8	8	0
Moscow Hospital	94	80	14
Cinder Hill Hospital ...	30	22	8

There were also 5 cases of Smallpox treated at home.

PART III.

WORK OF THE HEALTH DEPARTMENT,

1895.

STAFF.

The Staff of the Health Department consists at the present time of the Chief Sanitary Inspector, five Assistant Inspectors, a Smoke Inspector, two Disinfectors, and three Clerks.

With this limited number of inspectors it is impossible to carry out satisfactorily the provisions of the numerous Acts of Parliament which impose duties of such a varying character upon the Department. All the time devoted to these various matters, such as the inspection of factories and workshops, taking samples of food and drugs, &c., &c., is given at the expense of the general sanitary inspection of the town, which is, in itself, more than the Inspectors can deal with satisfactorily; anything like proper house-to-house inspection, which ought to be completed every three to four years, being an impossibility, and the house-to-house inspection has to be confined to the worst portions of the town.

SYSTEMATIC INSPECTION.

During the year the dairies, slaughterhouses, bakehouses, tripe boiling places, and mill lodges, have been regularly inspected with satisfactory results. House-to-house inspection has been carried on as far as practicable, but the epidemic of smallpox, which has taken up a great deal of the Inspectors' time, has prevented as much work of this kind being done as I should like to have seen, as I consider this one of the most valuable portions of our work. As in the past it has been found quite impossible to keep certain of the worst neighbourhoods even moderately clean, the people themselves being of dirty habits and allowing their dwellings and surroundings to get into a filthy condition, when notice to cleanse is served on them one of two things happen, either they at once remove, to reduce some other property, to the condition of their present dwelling, or they do sufficient cleaning to just pass muster for the time being, and then at once allow things to relapse into their old condition. Nothing will remedy this state of things short of a Sanitary Police Force sufficiently numerous to inspect all this class of property weekly and possessed of the power to bring dirty people at once before the magistrates, without going through the (for this special purpose) somewhat cumbrous proceedings of reporting to the authority, serving notice, &c., which is at present necessary under the Public Health Acts.

One of the most difficult matters we have to deal with is how to keep the numerous stacks of Privies in anything like a satisfactory condition. This is a constant source of trouble, and I am afraid will continue so until the pails are done away with and latrines substituted, and these should be inspected daily by a servant of the Corporation.

HOUSE-TO-HOUSE INSPECTION.

Two-hundred and ninety-five houses have been inspected in this way, with the result shown in the following table :—

TABLE I.

HOUSE-TO-HOUSE INSPECTION.

Total Houses Inspected, 295.

Houses without Back Doors	153
,, with Defective or Stone Drainage ...	83
,, ,, Slopstone Pipes connected ...	31
,, Dirty	50
,, with Defective Ventilation	95
,, ,, Defective Cellars	2
,, Suspected of Over-crowding	20
,, Damp	62
,, near Manure Heaps	5
,, ,, Slaughter Houses	13

These are inspections made without any complaint having been received or case of infectious disease having occurred. The very large percentage of defects is, no doubt, due to the fact that the worst districts have been inspected. One of the results of this inspection is that about 50 of these dwellings have been condemned by the Sanitary Committee as unfit for habitation.

There is urgent need for a great deal more of this kind of work, and I trust that next year I shall be able to report that much more has been done.

In addition to the above, however, 2,251 visits of a special character have been paid to back-to-back houses,

and 721 houses have been inspected on complaint, so that in all 3,267 houses have been thoroughly inspected.

The smoke test has been applied to the drains of 299 houses, and in 189 instances drainage defects, generally of a serious character, have been discovered and remedied.

Full particulars as to the nature of nuisances dealt with and of the work done by the Department will be found in the tables appended.

INSANITARY PROPERTY.

During the year the Insanitary Dwellings Sub-Committee have visited 113 dwellings reported by the Medical Officer, in addition to visiting a number of Insanitary courts, yards, blocks of privies, &c.

Of these 72 have been ordered to be closed as unfit for human habitation, and in the remainder alterations have been, or are being carried out of an extensive character which will very greatly improve their condition.

The dwellings ordered to be closed are:—

1, ...	Sun Street
21 and 22, ...	Higher Moor
5, ...	Rowbottom Court
2, 4, 6 8, 8a, 10, 10a, 12, 14 and 16,	Court 1, Shaw Road
2, 4, 6, 8 and 10, ...	Rowbottom Court
2, ...	Court 1, Eagle Street
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 7 and 9, ...	Jackson Pit
One house behind 14, ...	Jackson Pit
8 and 10, ...	Barnfold
3, 5, 7, 9, 11, 13, 15, 17 and 19, ...	Whitehead Square
2, 4, 6, 8 and 10, ...	Nelson Street
9, 11, 13, 15 and 17, ...	Priory Street
5, 6, 7, 10, 11, 12 and 13, ...	Court 1, Wardle Street
2, 4, 6, 8, 10, 12, 17, 19, 21 and 23,	Wild's Court

With a view to showing what has been done in the direction of closing Insanitary property during the past ten years I have prepared the following table, which shows that during that time 643 houses have been closed as unfit for human habitation. The great majority (484) have been closed by the owners on the recommendation of the Department without having recourse to any formal proceedings or even being brought to the notice of the Committee.

It is very satisfactory to find that owners have been generally so reasonable to deal with, that when the serious nature of the Insanitary condition of dwellings have been such as to preclude any satisfactory alteration being made, they have proved willing to close them and either pull them down or make use of them for purposes other than as dwellings for human beings.

Table II.

INSANITARY PROPERTY CLOSED during 10 Years, 1886-1895.

Dwellings Closed by Order of Sanitary Committee.		Dwellings Closed Voluntarily on Recommendation of Sanitary Department.	Total Dwellings Closed.
9 years, 1886-1894	87	359	446
1895	72	125	197
Total	159	484	643

In addition to the houses actually closed a number have been thoroughly renovated and so altered as to make them fairly satisfactory dwellings.

Of the 643 houses shown to have been closed during the past 10 years 296 have been actually pulled down, 186 back-to-back houses have been altered to 93 through dwellings, a portion of the remainder are now used as workshops, stables, &c., and the rest stand empty rapidly decaying away.

There still remain a large number of dwellings which are unfit for occupation, especially some 4,000 back-to-back houses, which ought to be made into through dwellings, and over 200 cellar dwellings, which ought to be done away with.

DAIRIES AND MILK SHOPS.

In my last Annual Report I mentioned that a revision of the Register of Milk Shops and Dairies was in progress. The final result of this revision was to show that a great number of people were selling milk without being registered and without any supervision.

The actual numbers show an increase of 95 names over last year's register, there being now 238 names on the register against 143 for last year. This increase is due to the cause mentioned above, and does not indicate any great increase in the number of milk sellers in the town.

There were 569 visits paid to Dairies and Milk Shops during the year, and it was only found necessary to serve nine notices for limewashing, &c.

There has been no outbreak of Infectious Disease in connection with the milk supply, and, speaking generally, the milk is handled in a careful and cleanly manner by the dairymen.

TABLE No. 10.

DAIRIES AND MILK SHOPS.

District.	No. on Register 1894.	No. Discontinued, 1895.	No. Registered, 1895.	No. on Register, 1895.	Notices served.	Cases of Sickness.				No. removed to Hospital.	Treated at Home.
						Smallpox	Scarlet Fever	Typhoid Fever	Diphtheria		
No. 1	40	2	37	75	2	1	3	...	...	3	1
,, 2	33	...	10	43	...	...	...	...	...	...	...
,, 3	20	2	40	58	5	...	1	...	...	1	...
,, 4	23	2	16	37	2	...	...	...	...	...	...
,, 5	27	4	2	25	...	...	...	...	...	...	...
Totals	143	10	105	238	9	1	4	...	...	4	1

COMMON LODGING-HOUSES.

These are under the control of the Watch Committee, and the Chief Constable, in his Report, gives the following particulars :—

Number of Registered Lodging Houses...	14
Total Accommodation per night	1,134
Number of Persons who Slept in them during the year	281,492

There were 7 cases of Infectious Disease removed from these Lodging-houses to the Borough Hospitals during the year, viz. :—Smallpox 5, and Enteric Fever 2.

SLAUGHTER-HOUSES.

I have inspected the whole of the slaughter-houses in the Borough and found them with very few exceptions kept in good condition and clean. A few are very old places situated in crowded districts, but so long as they are kept in good condition and there is no public abbatoir I am afraid nothing can be done with them.

There were 62 licenses issued which is four less than last year.

From the Tables appended it will be seen that there have been 3,487 visits paid by the Inspectors to slaughter-houses during the year, against 2,943 in the year 1894. It was found necessary to serve notices to cleanse, repair, &c., in 34 cases, and these notices were at once complied with.

There have been 20 seizures of unsound meat, one of which led to a prosecution.

In this case the meat was found in a cart in the brick-yard of Thomas Shaw, of Moorside. The carcase had been brought from the neighbourhood of Marsden, in Yorkshire, some miles away, and was waiting for a butcher in the town to remove it to his shop. A penalty of £20 and costs was inflicted on the owner of the cart and brickyard.

There is no possible excuse for dealing in this class of meat, and meat at the present time is so cheap that there can be but little inducement in the way of extra profit.

OFFENSIVE TRADES.

The only offensive trade carried on in the town is that of tripe boiling. There are 11 of these places on the Register against 13 in the previous year. They have been visited 686 times during the year, and it was found necessary to serve 10 notices for the abatement of various nuisances and for cleansing, which were at once complied with. They are generally carried on satisfactorily, and very few complaints are received about them.

BAKEHOUSES.

There are 56 Bakehouses in the town, but with the exception of about four they are on a very small scale and are generally in a very clean and satisfactory condition. There are some in connection with confectioners' shops in cellars, but these are kept scrupulously clean. The large machine bakehouses are well managed, clean and in suitable buildings.

There have been 326 visits paid to bakehouses during the year and five notices had to be served for cleansing, repairs, &c.

SMOKE NUISANCES.

We have to deplore the loss of our Smoke Inspector, the late Mr. Broadbent, who died in August, after a short illness, from Erysipelas. He was a most energetic Inspector, and took an enthusiastic interest in procuring an abatement in the amount of smoke emitted from our factory chimneys.

Owing to Mr. Broadbent's illness and death, a break in the taking of Smoke Observations occurred, extending over a period of nearly two months. This accounts for a slight diminution in the number of observations taken when compared with the previous year, the numbers being 923 for 1894 and 840 for 1895.

In my last Report I called your attention to the necessity of taking further action in the way of reducing the limit of black smoke allowed, before instituting prosecutions, and pointed out how such action on the part of the Corporation had, in the past, been immediately followed by marked improvement, as shown by the observations of the Inspector, and that after this initial improvement matters remained *in statu quo* until a further step was taken, the object of the mill firemen being apparently to keep within the limit fixed certainly, but to get as near to it as possible with safety.

Table III.

Hourly Smoke Observations, taken from January 12th, to September 21st, 1895.

Total Observations taken.	No Black Smoke.	Under 1 Minute.	Under 2 Minutes.	Under 3 Minutes.	Under 4 Minutes.	Under 5 Minutes.	Under 6 Minutes.	Under 7 Minutes.	Under 8 Minutes.	8 & 9 Minutes inclusive.	Over 9 Minutes.
516	9	28	49	55	62	64	51	53	39	50	56
Percentage	1·74	5·42	9·49	10·66	12·00	12·39	9·88	10·27	7·56	9·68	10·85

Information obtained from other Towns respecting Length of Observations and Limit of Black Smoke allowed.

Name of Town.	What Limit of Black Smoke from Mill Chimneys do you allow before taking Proceedings?	Over what Length of Time does each Observation extend?
Oldham	9 minutes	One hour
Manchester	1 minute	Half-an-hour
Bolton	2½ minutes	Half-an-hour
Preston	No standard fixed, but practically 6 minutes.	Half-an-hour
Nottingham	5 minutes usually allowed for coaling up.	About 15 minutes
Salford	5 minutes	One hour
Halifax	5 minutes	One hour
Sheffield	1 boiler, 2 minutes 2 boilers, 3 ,, 3 ,, 4 ,, 4 or more, 6 ,,	One hour
Leeds	5 minutes	One hour
Liverpool	4 minutes	Varies
Huddersfield	7 minutes	One hour
Blackburn	7 minutes	One hour
Newcastle-upon-Tyne	No limit has been fixed	One hour

On August 15th the Committee passed a resolution reducing the length of each observation to half-an-hour, and reducing the limit of black smoke to four minutes. Previously each observation extended over an hour, and the limit of black smoke allowed was nine minutes.

On September 23rd Inspector Taylor commenced to take half-hourly observations, and although it will be generally considered that four minutes in the half-hour is more severe than even eight minutes in the hour and much more severe than nine minutes in the hour, yet the result of the observations shows, what our previous experience led us to expect, that the percentage of excesses over the limit allowed dropped immediately.

In the earlier part of the year, with a limit of nine minutes in the hour, the excesses amounted to 10·8 per cent. of the total number of observations, while in the last three months, with a limit of four minutes in the half-hour, the excesses only amounted to 5·8 per cent., or just about one-half.

Table IV.

Half-Hourly Smoke Observations, taken from September 23rd, to December 28th, 1895.

Total Observations taken.	No Black Smoke.	Under 1 Minute.	Under 2 Minutes.	Under 3 Minutes.	3 & 4 Minutes inclusive.	Over 4 Minutes.
324	46	57	86	71	45	19
Percentage	14·19	17·59	26·54	21·91	13·88	5·86

This proves conclusively to my mind that this tightening of the limit is absolutely no hardship on the manufacturers, as this almost startling reduction has not been brought about by any great increase in the number of smoke prevention or consuming appliances, but simply by increased care on the part of the firemen, which must benefit their employers by producing more regular production of steam, together with some slight diminution in the quantity of coal consumed.

More than one-half of the smoke nuisance is caused by the ignorance and laziness of firemen, as is well shown by the above-named facts.

The section under which our smoke prosecutions are instituted is in my opinion defective, in so far as it offers no protection to the employer who attaches to his boiler satisfactory appliances or so increases his boiler accommodation as to obviate any necessity for over firing.

Where an employer has done his share in this way the responsibility in the future ought to rest on the shoulders of the person who is then to blame for causing the nuisance, *viz.*, the fireman.

Until the employer has fully completed his part he should rightly be held entirely responsible, but once having made proper provision, and employed a properly qualified man to act as fireman, his responsibility should cease.

One result of the endeavours to prevent the emission of black smoke is to raise the fireman from among the class of the unskilled to that of the skilled labourer. Any man of sufficient strength can throw coals on to a boiler fire, but to do so in such a way as to obtain the greatest and most regular steam production, with the least smoke and the least consumption of coal, requires a man with experience and intelligence.

In Chicago the Council of the Corporation have gone so far as to institute a Board of Examining Engineers to which it is proposed to give the following powers:—

1.—"To examine engineers, firemen, and boiler tenders, and to issue licenses to those who pass a rigid examination."

2.—"To revoke or suspend any license thus issued upon satisfactory proof that a steam plant has been so handled as to endanger the lives, health, or comfort of occupants of buildings, or of the public."

3.—"To inspect, revise and when satisfactory approve of the steam plant, plans of all buildings for which a building permit is required; said approval to be made before any building permit can issue."

4.—"To condemn and order the suspension upon proper proof, of any steam plant which is so constructed as to be a menace to the lives, health or comfort of the occupants of the building in which it is located, or to the public."

5.—"To so organize the Department of Steam and Power Inspection as to provide for a proper supervision over all steam plants, and over all machinery and appliances which are placed in charge of engineers and firemen. This will include an inspection of elevators, steampipe fittings and connections, and such other divisions as come under the general head of steam plants."

6.—"In all cases when steam plants are constructed in violation of well-known and accepted principles, by reason of which perfect fuel combustion is impossible, the Board have power to order the immediate making of the necessary changes. On the failure of an owner to conform to this order, after the expiration of a reasonable time, the Board to condemn and order the suppression of the steam plant as a nuisance."

Table V.

Nature of Smoke Appliances in Use in the Borough of Oldham.

Name of Appliances.	No. of Mills.	No. of Boilers.
Cass's Coking Machines	4	15
Dyson & Williamson's Coking Machines ...	1	2
Bennis's Sprinklers	4	11
Proctor's do.	7	17
Leach & Co.'s do.	1	1
Meldrum Bros. Forced Draught Furnace ...	5	6
Newton's do. do. ..	1	1
Perritt's do. do. ..	1	2
Broadbent's Air Regulators	15	49
*Broadbent's Steam Poker	4	13
‡Whittle's Steam Injectors	4	13
Steam Jets	3	7
‡Tweedale & Massey's Air Regulators ...	2	6
Caddy's Tubular Bars	9	30
Wilson's Moveable Bars	6	15
Yates & Thom's Rocking Bars	4	6
Taylor's Patent Bridge Walls	1	4
Holden's Hollow Bars and Dead Plate ..	1	2
Hollow Bridge Walls	2	7
	75	207

* Not used. ‡ Only in use at one mill.

Mills where no appliances are fixed—84 Mills ; 202 Boilers.

There are also 60 workshops chimneys not on books.

In the Table No. 18 full particulars are given of the observations taken during the year, the prosecutions which have been taken on them, and particulars of the various smoke prevention and consuming appliances in use in the town.

From Table V. it will be seen that no less than 207 out of a total of 409 mill boilers in the town have some sort or other of appliances fixed to them for preventing the smoke nuisance. From my own observation I have come to the conclusion that the most satisfactory solution of the difficulty is to provide sufficient boiler accommodation and satisfactory firemen. In many instances, however, it is impossible, owing to lack of room, to provide sufficient boiler accommodation, and in these cases it becomes necessary to use some form of apparatus for smoke prevention or consumption. Of these the various forms of automatic stokers are probably the best, especially those which are known as "coking stokers."

Table VI.

SMOKE PROSECUTIONS DURING 1895.

No. of Firms Fined.	Amount of Fine.	No. of times previously prosecuted.
1	£4 and Costs	7
1	£2 ,,	8
1	£2 ,,	7
2	£2 ,,	6
1	£2 ,,	5
1	£2 ,,	2
2	£1 ,,	6
2	£1 ,,	5
1	£1 ,,	4
2	£1 ,,	2
2	£1 ,,	1
1	£1 ,,	0
1	10/- ,,	7
2	10/- ,,	4
4	10/- ,,	3
2	10/- ,,	2
3	10/- ,,	1
2	10/- ,,	0
1	5/- ,,	6
2	5/- ,,	5
1	5/- ,,	2
3	5/- ,,	1
1	5/- ,,	0
1	1/- ,,	11
1	Costs only	7
1	,,	5
1	,,	0
1	,,	2
1	Dismissed	0

THE SALE OF FOOD AND DRUGS.

In Table VII. there will be found a detailed statement of the work which has been done with a view to prevent the adulteration of food and drugs, from the year 1876 to the present time.

There were 147 samples purchased during the year, of which 6·1 per cent. were found to be adulterated. These samples consisted of :—

120	samples of	Milk,	of which	6	were adulterated.
9	,,	Drugs,	,,	3	,,
18	,,	Butter, &c.			

Three cases were dealt with by the Committee, and the vendors (of tincture of opium, which was deficient in spirit) were severely cautioned.

Table VII.

Samples Obtained Under the "Sale of Food and Drugs Act."

Year.	Total.		Milk.		Butter.		Bread and Flour.		Other Groceries.		Wines and Spirits.		Sundries	
	No. of Samples	Percentage Adulterated	No. of Samples	Percentage Adulterated	No. of Samples.	Percentage Adulterated	No. of Samples.	Percentage Adulterated.	No of Samples.	Percentage Adulterated.	No. of Samples.	Percentage Adulterated.	No. of Samples.	Percentage Adulterated.
1876	74	27·0	38	42·1	7	...	6		23	17·4	...	...	...	...
1877	81	23·4	34	26·5	...	...	21		...	...	20	50·0	6	..
1878	74	25·7	55	21·8	...	...		..	12	8·3	6	100·0	1	...
1879	77	14·3	54	20·4	...	...	12	...	6	...	3	...	2	...
1880	87	21·8	43	27·9	8	12·5	8	...	22	18·2	6	33·3	...	...
1881	100	10·0	67	10·4	13	...	...	.	10	10·0	7	28·6	3	...
1882	100	19·0	44	22·7	15	33·3	4	...	17	...	13	30·8	7	...
1883	101	12·9	43	16·3	8	37·5	2	...	20	...	18	16·6	10	..
1884	85	8·2	47	2·1	11	18·2	...	...	8	37·5	8	12·5	11	...
1885	63	15·9	43	18·6	17	11·7	...	...	3	...	...	...	...	...
1886	62	9·7	40	5·0	9	1·1	..	...	13	23·1	...	...	...	...
1887	75	8·0	57	8·8	4	...	4	...	6	16·6	4	...	...	...
1888	90	8·9	70	8·6	4	25·0	...	...	4	25·0	8	...	4	...
1889	98	6·1	80	6·2	5	20·0	...	...	4	...	6	...	3	...
1890	98	6·1	75	6·6	7	...	...	...	6	16·6	4	...	6	...
1891	119	5·9	75	4·0	13	23·1	...	...	27	...	4	25·0	...	...
1892	90	1·1	68	1·5	3	...	...	...	7	...	4	...	8	...
1893	106	10·4	84	8·3	7	42·8	...	...	6	...	3	33·3	6	...
1894	139	2·1	83	3·6	18	...	6	...	26	...	3	...	3	...
1895	147	6·1	120	5·0	11	...	...	...	1	...	6	...	9	33·3

Six cases of milk adulteration were sent before the Magistrates, with the following results :—

2 were fined 40/- and costs each.
2 „ 20/- „
1 was fined 10/- and costs ; and
1 was dismissed.

Considering the great difficulty there is in discovering offenders under this Act, I cannot help thinking that the penalties imposed are much too lenient ; in fact, were it not for the exposure (and that does not affect farmers from a distance who send their milk by train), it would pay the vendors to adulterate, and run the risk of being discovered.

FACTORY AND WORKSHOPS ACT.

In Table VIII. there will be found the details of the work done under this Act during the year. Inspections under this Act have been regularly carried out, with satisfactory results so far as they go. The workshops, however, require more attention than it is possible to give them with the limited staff of Inspectors attached to the Department.

TABLE VIII.

SHOWING THE NUMBER OF WORKSHOPS REGISTERED, VISITS MADE, AND DEFECTS REMOVED.

No. of Workshops Registered	262
No. of Workshops Reported to Factory Inspectors	208
No. of Visits Paid	259

Defects Found.	Notices Served.	Notices complied with.
Defective Drainage	5	6
Defective Ventilation	2	2
Damp	4	4
Broken Floors or Walls	3	3
Insufficient or no Privy or Closet Accommodation...	1	1
Defective Privies or Closets...	2	1
Defective or no Urinals	1	1
Dirty Workshops	23	28

TABLE No. 17.

MAGISTERIAL PROCEEDINGS, 1895.

No. of Cases.	Particulars of Complaint.	How Disposed of.	Penalties. £	s.	d.
45	Smoke Nuisance	One fined 1/- and costs; eight 5/- and costs; fourteen 10/- and costs; ten 20/- and costs; six 40/- and costs; one 80/- and costs; four paid costs; and one was dismissed.....	35	1	0
6	Milk Adulteration	One fined 10/- and costs; two 20/- and costs; two 40/- and costs; and one dismissed.....	6	10	0
1	Unsound Meat	Fined £20 and costs ...	20	0	0
2	Occupying property condemned as unfit for habitation	Withdrawn, both houses having been vacated ...	...	...	...
13	Sanitary defects in property	Orders made in seven cases to abate nuisance within one month; in six cases, plans for alterations agreed upon.	...	...	...
67		£	61	11	0

TABLE No. 18.

Showing the number of Smoke Observations taken and Inspections of Mill Lodges and Slaughter-Houses made during the years 1894-95.

Fortnight ending		Smoke Observations.		Mill Lodge Inspections.		Slaughter-House Inspections.	
1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.
Jan. 3	Jan. 12...	20	28	148	27	93	108
,, 17	,, 26...	40	...	59	114	119	111
,, 31	Feb. 9...	42	34	225	66	123	117
Feb. 14	,, 23...	41	38	39	135	113	137
,, 28	Mar. 9...	29	34	209	117	98	120
Mar. 14	,, 23...	39	51	17	130	80	142
,, 28	Apr. 6...	25	51	94	73	61	91
Apr. 11	,, 20...	...	31	127	67	88	104
,, 25	May 4...	33	41	128	192	129	159
May 9	,, 18 ..	20	35	94	131	61	143
,, 23	June 1...	37	46	127	237	88	184
June 2	,, 15...	24	33	129	93	94	183
,, 16	,, 29...	50	26	58	158	159	107
,, 30	July 13...	50	...	199	64	102	90
July 14	,, 27...	44	...	100	106	143	132
,, 28	Aug. 10...	48	30	174	123	108	189
Aug. 11	,, 24...	41	28	121	123	124	173
Sep. 8	Sep. 7...	41	10	278	145	211	37
,, 22	,, 21...	47	...	191	177	143	172
Oct. 6	Oct. 5...	48	52	130	93	68	111
,, 20	,, 19...	40	49	113	52	123	115
Nov. 3	Nov. 2...	34	47	207	217	153	150
,, 17	,, 16...	36	55	104	77	127	160
Dec. 1	,, 30...	26	61	197	194	131	142
,, 15	Dec. 14...	47	27	70	131	110	157
,, 29	,, 28...	21	33	229	162	94	153
		923	840	3567	3204	2943	3487

INSPECTORS' REPORTS.

Total Number of Reports of Nuisances and Notices Served	3307
Total Number of Notices complied with...	3090
Number of Complaints Received and Visited	1170
Re-Inspection of Nuisances under Notice	8294
Number of Cases dealt with by Sanitary Committee in 1895 ...	609
Number of Cases remaining unabated	109
Number of Cases dealt with by the Magistrates in 1885	67
Back-to-Back Houses visited	2251
House-to-House Inspection	295
Houses Inspected on Complaint	721
Houses Repaired...	132

	Notices Served.	Notices Complied with.
Dirty	156	153
Damp, Defective Roof, &c....	552	562
Defective Ventilation	75	96
Defective Cellars	164	157
Privy Nuisances	1057	984
Ashpits	177	89
Defective Water Supply	67	72
Overcrowding	9	12
Unfit for Habitation	35	35

DRAINAGE DEFECTS.

	Notices Services.	Notices Complied with.
Blocked Drains	514	520
Defective Drains...	503	529
Gully Traps improperly laid	39	37
Drain inlets untrapped or defectively trapped... ...	196	196
Waste Pipes and Sloppipes directly connected with drain	185	162
Waste Pipes improperly trapped	51	50
Sloppipe, defective or improperly ventilated	257	303
Defective Water Closets	57	65
New Water Closets Fixed	34	33

No. of Smoke Tests 179. No. of Houses Tested 299.
No. of Defects found 189. 4418 yards of Channel Tiles and Drainage Pipes have been laid or re-laid during the year.
858 Traps Fixed. Ventilating Grids 129.

	Visits Paid.	Notices Served.	No. Complied with.
Bakehouses	326	5	5
Dairies and Cowsheds	569	9	9
Farms	199	12	20
Pigsties	845	...	...
Slaughter Houses	3487	23	24
Offensive Trades	686	10	8
Mill Lodges	3204	23	23
Factories and Workshops	259	33	31

Inspection under Contagious Diseases (Animals) Act	15
Animals destroyed	25
Unsound Food: Meat, Fish, Fruit, &c., destroyed .. ..Lbs.	4667
Sample taken under Food and Drugs Act	147
Letters written to Property Owners or Agents, &c.	151
Miscellaneous Visits, &c	933
Privies inspected	3549
New Privies built	66
Ashpits built	18

Connections and Outlets to Main Sewers	
Yards and Passages Repaired and Flagged	152
Erections in Yards reported	15
Defective Urinals...	18
Accumulation of Offensive Matter	361
Carcases of Animals in Water	84
Stagnant Water	63
Manure Pits built	9
Poultry in Houses	14
Dust and Fly from Mill	4
Low or Defective Chimneys	23
Dangerous Places reported...	18
Coal Gas Nuisances and Escapes reported	13
Dead Bodies removed to Mortuary	21

Visits to Cases of Infectious Diseases	1128
Visits to Cases of Phthisis	156
Visits to Deaths under 1 year of age...	635
Cases removed to Hospital...	248
Houses Stripped and Cleaned after Infectious Disease...	78

HOUSES AND CLOTHING DISINFECTED.

Number of Houses Disinfected during the year 1895	534
Number of Rooms do. do. do.	1540
Number of lots of Clothing Disinfected during the year 1895 ...	544
Number of Articles do. do. do.	20032
Number of Articles destroyed do. do. do.	581

Including 4 Schools and 1 Shippon Disinfected.

CLOTHING, &c., 1894-1895.

Articles.	Disinfected.		Destroyed.		Totals.	
	1894.	1895.	1894.	1895.	1894.	1895.
Blankets	883	1196	1	32	884	1228
Sheets	796	1093	7	13	803	1106
Pillows	1023	1242	46	36	1069	1278
Bolsters	576	686	12	18	588	704
Quilts.....	754	784	...	23	754	807
Mattresses	284	463	63	196	347	659
Beds	550	749	91	112	641	861
Carpets	110	742	3	1	113	743
Rugs	312	622	...	2	312	624
Curtains.....	93	758	...	. .	93	758
Clothes	2961	10683	6	85	2967	10768
Sundry Articles ...	842	1014	30	63	872	1077
	9184	20032	259	581	9443	20613

INFECTIOUS CASES, 1894-1895.

(Cases and Visits).

	1894.	1895.
Number of Cases	574	... 537
Number of Visits	1296	... 1128
Number of Visits to Cases of Phthisis	120	... 156

NIGHTSOIL AND ASHES DEPARTMENT, 1895.

Number of Sanitary Pans in the Borough		23636
Do.	Iron Tanks, Cesspools, &c., in the Borough	67
Do.	Water Closets in the Borough	1292
Do.	Waste-water Closets in the Borough	311
Do.	Ashpits in the Borough	10407
Do.	Collected Places with Ashpans, &c., in the Borough	759
Do.	Houses represented	30915
Do.	Mills, Workshops, &c., represented	530
Do.	Churches, Schools, &c, represented	197

NIGHTSOIL DEPARTMENT.

Number of Sanitary Pans Emptied during the night...		1202770
Do.	Iron Tanks, Cesspools, &c, Emptied during the night	195
Do.	Slaughter-Houses from which Butchers' Offal has been removed during the night...	5473
Do.	Fish Shops from which Fish Offal bas been removed during the day	10415
Do.	Loads of Excreta collected	13503
Do.	do. Butchers' Offall collected	611
Do.	do. Fish Offal collected	660
Do.	do. Shoddy Dirt collected	6195
Do.	Tons of Manure sent out from Higginshaw	14423
Do.	do. do. Bower Cleugh	6855
	Total Number of Tons sent out	21278

ASHES DEPARTMENT.

Number of Ashpits Emptied during the day		50520
Do.	Places with Ashpans, &c., collected during the day...	44079
Do.	Loads of Ashes taken to Destructor	9023
Do.	do. do. Corporation Tips...	16431
Do.	do. do. elsewhere	9343
Do.	do. Clinkers removed	2612
	Total No. of Loads removed	37409

DESTRUCTOR.

	Tons	Cwt.
Quantity of Ashes, Fish Offal and Garbage consumed at the Destructor	10616	18
Average per Furnace per day of 24 hours	6	9½
Quantity of Mortar Sold...	935	3

REPORT OF THE CHIEF INSPECTOR *re* INSPECTION OF MEAT SUPPLY.

To the Medical Officer of Health.

Sir,

Having devoted considerable attention during the past year (1895) to the inspection of cattle and other animals intended for human food, I venture to offer a few remarks thereon, which may be of some interest.

That the supervision of the food supply of a large town like the Borough of Oldham is of a difficult and complicated nature, will be readily seen when it is noticed that we are surrounded on all sides by districts seeking to supply our toiling populations with milk on the one hand as a special food product for infantile consumption, and too often meat on the other for adults with such carcases as have deteriorated physically and pecuniarily in value to the farmer, from many causes, and which are consequently of an inferior and often of a doubtful character and fitness for human consumption.

The paramount necessity of a stricter supervision of farm-stocked cattle (if we are to have a healthy milk supply—free from tuberculous disease) is, I think, slowly coming to be regarded as inevitable.

The recognised evils and dangers of such supplies from tuberculous animals will, I think, eventually lead the legislature to classify this disease as a contagious malady, requiring more vigilant inspection for examination of stock, and for detection and slaughter of which compensation will be given as in compulsory slaughter of animals affected with Pleuro-Pneumonia and Swine Fever.

To keep a check on the importation of such carcases, which are mostly offered for sale when necessity compels the farmer to get rid of his cattle by barrenness, milk fever, sickness, or accidents of one kind or another, would require more systematic supervision and visiting of farm premises than I am afraid the district councils of any agricultural area are prepared to adopt at the present time. Seeing, however, that these conditions exist, it has become a matter of urgent moment for our protection to use all available means by keeping a sharp look-out on the outskirts of the town, having those ready at any time who will give speedy information on seeing carcases being brought within the borough.

Numerous reported cases of carcases being removed from one district to another have been investigated and inspected, on my complaint, by other authorities, leading in one case to a seizure of meat and a conviction for dressing of carcases on unlicensed premises, and in another to a diseased cow on farm premises being sent to the knacker's yard, instead of to the butcher's slaughter-house or shop, where it would have landed had not prompt notice been given and acted upon.

The tuberculous carcase of a cow was seized in the early part of the year, which had been killed and dressed on farm premises beyond Marsden, and brought within the borough to dispose of for sale.

For this offence, and for being in possession of a diseased carcase the magistrates imposed a penalty of £20 and costs.

A second tuberculous cow, offered for sale by public auction in a district bordering on the borough, was knocked down to an Oldham butcher who was in drink, and on

getting it to the slaughter-house he soon found out that he had bought a "gonner," and reported it before attempting to kill or dress it. When dressed it was found badly graped and the lungs attached to the pleuro costal ribs. This was, of course, destroyed.

A third case, reported to us by a veterinary surgeon as one of suspicious Pleuro-Pneumonia, was diagnosed as Tuberculosis of a more advanced stage, and from which the cow died within a few hours after notification had been given us.

A further case of gross cruelty to a cow, accidently discovered being brought into the town, led to the animal being despatched to the knacker's yard instead of reaching the butcher's slaughter-house. On being examined, the animal was found diseased and utterly unfit for human food. The owner was subsequently summoned before the magistrates by the Society's officer for the Prevention of Cruelty to Animals, and fined 40/- and costs on the evidence tendered by the officials of this department and others.

Altogether, during the year, investigations and inspections have been made in regard to about 15 or more beasts. The carcases of 12 pigs have been destroyed, and one passed as satisfactory which had come sheeted in a railway truck with other pigs, and was found to have been dressed on account of having broken its leg just on the point of leaving the market.

I estimate the total amount of unsound meat destroyed at about 5,171 lbs., including cows, 12 pigs, two sheep, and one calf.

Nine dogs and one cat have also been destroyed.

In regard to a suspected outbreak of Swine Fever reported to the Board of Agriculture, after they had ordered the slaughter of a second pig and had the viscera sent up to the Board's offices for examination, they must have come to the conclusion that it was a case of mistaken diagnosis, seeing that they declared the premises free from Swine Fever within a few days, and forwarded payment for the slaughter of the pig they authorised to be killed and all other expenses.

This is noticeable as being the first instance where compensation has been paid in Oldham under the Swine Fever Regulations of the Board.

In reference to the carrying out of the Rabies Order, I have to say that if the action of the Board—as a court of appeal—was as decisive and prompt as it is in regard to Swine Fever and Pleuro Pneumonia where the affected organs of the animals have to be sent for their inspections, it would tend to allay the anxieties and fears of officials as well as the public at large. As it is the cry of "mad dog!" raised by any excited individual causes commotion and worry which neither Inspectors nor Veterinary Surgeons can easily dispel or satisfy.

Several postmortems have been made on dogs and on a cat, where they were known to have bitten anyone, but no evidence of rabies was found. Three cases of Dumb Rabies have been certified, and on portions of the viscera and spinal column of two of them being forwarded to the Board's offices, we had a reply stating that no reliable opinion can be formed as to whether a dog was suffering from rabies only by the inoculation of another animal: meaning of course that this investigation must be carried out by a

person appointed under the Vivisection Act, or by Dr. Sherrington, the Superintendent of the Brown Institution in London,

Such is a brief outline in regard to one part of our work, found principally at the railway sidings, in the slaughter-houses, and from other sources in the course of our inspections, requiring vigilant attention at all points where food is prepared and exposed for consumption.

I am pleased to say that the work of the District Inspectors has been willingly and efficently discharged in their several divisions, and although at times we do not succeed as quickly as the public, or as we would desire, in the removal or abatement of nuisances, it must be remembered that the greater portion of our work has to be accomplished by appealing to the interests and welfare of those immediately affected.

I remain, your obedient servant,

THOMAS RUSHWORTH,

Chief Sanitary Inspector.

APPENDIX I.

REPORT ON AN ENQUIRY ON THE PLUMBO-SOLVENT ACTION OF THE OLDHAM PUBLIC WATER SUPPLY.

In the autumn of 1895 I heard from different sources of a number of cases of suspected lead poisoning, and in each instance enquiries were made as to the possible causes of the poisoning, with the result that, with one exception, there was no other assignable cause, than the use of the water as laid on to the houses through ordinary lead service pipes.

The water in each case was sampled and found to contain lead in quantities varying from one-tenth of a grain to two-fifths of a grain per gallon. In one of the worst cases the old lead service pipes were removed and replaced by block tin lined pipes. An examination of the old pipe revealed the presence of a copious brown deposit in flaky masses lining the pipe and this was found to contain some salt of lead although the quantity was not sufficient for an exhaustive examination.

These facts led me to make an examination of the water from the various reservoirs with a view of ascertaining as far as might be possible on what this plumbo-solvent action depended and whether the various supplies differed from one another in this respect.

It was found that all the waters were more or less acid although the amount of acid in the worst sample was very

slight when compared with many of the moorland water supplies in the West Riding of Yorkshire, notably Sheffield and Wakefield.

This acidity is, I feel convinced, due to the action of exposed peaty land which forms a portion of the gathering grounds for each of the three series of reservoirs, Piethorn, Denshaw, and Castleshaw.

It is worthy of notice that the waters containing the greatest amount of albumenoid ammonia were the most acid; and this albumenoid ammonia is almost certainly derived from the peat.

Before going further it will be better perhaps to explain shortly the arrangement of the Waterworks.

The Reservoirs are situated in three valleys, Piethorn, Denshaw, and Castleshaw, situated about 6 miles to the north east of the town. The water from the Denshaw series of Reservoirs is decanted into Hanging Lees, the upper reservoir of the Piethorn series, and thence, either delivered to the higher portion of Oldham or again decanted into the Piethorn Reservoir, from which it is supplied direct to the town. The Castleshaw Water is carried to Strinesdale Reservoir, near the town, and from there delivered to the town service.

The whole of these gathering grounds are the property of the Corporation, and the land is not cultivated or manured in any way, and every care has been taken to prevent any possible pollution of the water. The sides of the valleys consist of grassy slopes off which the water rapidly runs, although the soil is to a great extent peaty. A portion of the land at the top of the slopes which drain into the reservoirs consists of peat, on which a little rough grass and heather grows.

It is very interesting to find that the acidity of the water in the various reservoirs, with the exception of Strinesdale, to which I shall refer later, was found to vary with the proportional amount of this unprotected peaty land which drains into it.

The streams running into the reservoirs were found to be generally more acid than the reservoirs, and the further up the hillside they were followed the more acid they were found. In the course of these streams numerous settling tanks have been constructed, and it would seem that in respect to this acidity, as well as in the settling of suspended matter, they serve a most useful purpose.

The analysis of the water from the various reservoirs, set out in detail in the following table, shows that the Oldham water is exceedingly good and in every way a most satisfactory supply for the town.

TABLE. I.

ANALYSIS OF THE WATER TAKEN DIRECT FROM THE FOLLOWING RESERVOIRS.

SOURCE.	Total Solids in Grains per Gallon.	Volatile Solids in Grains per Gallon.	Chloride Grains per Gallon.	Hardness.			Free Ammonia in parts per million.	Albumen Ammonia in parts per million.
				Permanent	Temporary	Total.		
Piethorn Reservoir .	5·5	0·5	1·05	3·0	·0	3·0	·00	·03
Hanging Lees	5·0	1·0	1·05	3·0	0·0	3·0	·15	·01
New Year's Bridge .	5·0	1·0	0·98	3·5	1·0	4·5	·00	·04
(Denshaw) Castleshaw	5·0	2·0	0·7	2·0	1·0	3·0	·00	·12
Strinesdale	6·0	3·5	0·98	2·5	1·5	4·0	·00	·13

The waters were also examined for acidity with the results shown below. The acid was reckoned as sulphuric acid and expressed as such in grains per gallon. Phenolphthallein was used as an indicator and the titration was made with a standard solution of sodium hydrate of which one cubic centimetre was equal to 1 milligram of sulphuric acid.

TABLE II.

ACIDITY OF THE WATERS FROM THE VARIOUS RESERVOIRS.

SOURCE	ACIDITY AS SULPHURIC ACID IN GRAINS PER GALLON.
Piethorn	·35
Hanging Lees...	·28
New Year's Bridge (Denshaw)	·49
Castleshaw	·56
Strinesdale	·63

The most interesting point in these analyses is the difference which was found to exist between the Castleshaw and Strinesdale waters. The Strinesdale Reservoir receives only the water from Castleshaw, which is conveyed in iron pipes and delivered in a spray into the Strinesdale Reservoir. There may be springs in the bed of the reservoir but the amount of water from them must be so small as to have no possible effect on the general condition of the water, and great care has been taken to exclude all surface water from the Strinesdale valley.

The only possible source of the differences observed seems to be contamination from the air, all the water being

sprayed into the air not more than half-a-mile from a number of mill chimneys, and in fact the reservoir lies just above the Waterhead end of the town.

To ascertain the effect the atmosphere had, some absolutely neutral distilled water was exposed for some days in the immediate vicinity of the reservoir, with, however, only negative results.

Having now ascertained the exact composition of the water and the fact that it was acid in reaction, experiments were made to test the extent of its action on both lead foil and ordinary lead pipe.

TABLE III.

Source.	Appearance after three weeks contact with	
	Lead Foil	Lead Pipe
Piethorn	Much Greyish Deposit...	Slight Greyish Deposit
Hanging Lees	Greyish Deposit with slight glistening appearance	Greyish Deposit with slight glistening appearance
New Year's Bridge ...	Grey Deposit	Grey Deposit and much brown suspended matter
Castleshaw	Slight Tarnishing of metal	Yellowish white deposit with glistening particles
Strinesdale	Greyish Yellow Deposit with slight glistening particles easily detached	Same as foil but much more marked

Although the physical appearances noted above point to the action on lead pipe, which is not pure lead, being greater than on lead foil (pure) chemical analysis did not confirm it as in each instance only a trace of lead went into solution and a comparison of the amount was almost an impossibility.

The glistening particles noticed in the case of the water from Strinesdale and in a less degree in that from Castleshaw were separated and allowed to dry by contact with the air and were afterwards treated with a further portion of water from the same reservoir, allowed to remain undisturbed for a few days, and then analysed. Although after the first experiment only a trace of lead was found, this further experiment of allowing the deposit to dry and oxidise resulted in a tenth of a grain of lead per gallon being dissolved.

As was to be expected it was found that the more acid waters had the greater action on lead.

A further experiment was tried with the Strinesdale water. To a measured portion of the water exactly the same quantity of Sodium Hydrate solution was added as was found necessary for neutralization when Phenolpthallein was used as an indicator, and then exactly similar experiments to those above described, on lead foil and pipe, were carried out, but with absolutely negative results.

From this experiment it would therefore appear that the action of the water on lead is due to the acid and the acid only, and this is further borne out by the fact previously noticed, that the more acid waters were much more active in attacking lead.

Another experiment was tried with excess of the Sodium Hydrate solution, when a most energetic action on the lead foil and pipe was found to take place.

It having come to my knowledge that a large amount of so-called "tin-lined" lead pipe was used in putting in water service pipes I obtained a portion. This pipe is supposed to be washed with tin in a molten condition on its inner

surface, and it has a whiter and brighter appearance than ordinary lead pipe.

Experiments carried out with this pipe showed conclusively, however, that it is *absolutely valueless* in preventing the action of the water on the lead pipe, for there was no difference in any way between the action of the water on this pipe and the ordinary lead pipe. These experiments were made with the Strinesdale water as being the most active.

Similar experiments were made with Block Tin lined lead pipe on which a plumber had made an ordinary wiped joint, and traces of lead were found in the water, but the quantity was much less than with ordinary lead piping. This pipe consists of a tin pipe about $\frac{1}{8}$th of an inch in thickness placed within lead piping. It is much more expensive than the ordinary pipe but it has many advantages as the water, except in the case of wiped joints, cannot come into contact with lead.

In conclusion it would appear to be advisable, in order to reduce the plumbo-solvent action of the water, to make every effort to get the water off the peaty gathering grounds as quickly as possible and afterwards delay it by frequent settling tanks and decanting from reservoir to reservoir. Also at the Strinesdale Reservoir to expose the water to the vitiated atmosphere as little as possible.

The use of a good quality of *block tin lined* pipe should be insisted upon as far as possible.

APPENDIX II.

(Circular addressed to the Medical Practitioners in the Town.)

OFFICER OF HEALTH'S DEPARTMENT,
TOWN HALL, OLDHAM,
June 27th, 1895.

DEAR SIR,

Smallpox having made its appearance in Oldham, I would ask you to be on the look-out for mild and modified cases.

In such cases as a rule, two or three days after a preliminary illness, a Papular Eruption comes out on the face and arms.

I am, dear Sir,
Yours truly,
CHAS. H. TATTERSALL,
Medical Officer of Health.

(Circular sent to all the Schools in the Town.)

BOROUGH OF OLDHAM.

MEASLES.

TO SCHOOLMASTERS AND SCHOOLMISTRESSES.

In order to protect the other Scholars from infection, when a case of Measles occurs in the School, it is necessary that the Teacher should recognise and send home cases at the beginning, before the eruption appears. The disease being so prevalent as it is in some parts of the town it will be to the interest of the School if the Teacher will examine the Pupils daily. It would be well to send home any child who is sneezing or coughing, especially if the eyes are watery and the forehead is hot. It is better to make a mistake in this matter than to expose a number of other children to infection.

CHAS. H. TATTERSALL,

Medical Officer of Health.

(Leaflet distributed in Schools where Measles had appeared.)

OFFICER OF HEALTH'S DEPARTMENT,

TOWN HALL, OLDHAM.

You are requested to read this circular carefully, and to carry out the recommendations contained in it :—

1.—Measles is a very fatal disease.

2.—Children suffering from Measles should, where possible, be isolated upstairs, in a room ventilated by a partially open window, and with a good fire in the room.

3.—No child, or woman with a baby or child, should be admitted into a house where measles is present.

4.—The case or cases of measles should not be let out until the fine bran has cleared completely off the skin, which as a rule, takes about 4 weeks.

5.—It would be well that the clothes of the children should be disinfected before they return to school. This will be to some extent done by exposing them freely to the air outside for several days ; but if the parents will take the clothes to the Health Yard, Rhodes Bank, they will be disinfected for them.

Disinfectants will be supplied upon application at the Sanitary Office, 2, Mill Street.

C. H. TATTERSALL,

Medical Officer of Health.

(Large Placard.)

BOROUGH OF OLDHAM.

PRECAUTIONS AGAINST INFLUENZA.

Influenza prevails extensively in Oldham at present. It is a highly infectious and very fatal disease, being frequently followed by inflammation of the lungs. If neglected it is often followed by prolonged weakness and depression. The disease is generally marked by its sudden onset and by severe headache, with pains in the back and limbs, and fever. Wherever possible the following precautions should be taken :—

1.—The sick should be separated from the healthy. This is especially important in the case of first attacks in a household.

2.—Infected articles and rooms should be cleansed and disinfected.

3.—Those attacked should not, on any account join assemblages of people, as they are likely to convey the disease to others.

4.—During the epidemic special attention to cleanliness and ventilation should be shown in Factories and Workshops. Workpeople are advised to wear warm clothing and to avoid unnecessary exposure.

5.—Persons who are attacked by Influenza should at once seek rest, warmth, and medical treatment; and they should bear in mind that the risk of a relapse with dangerous complications, constitutes a chief danger of the disease.

CHAS. H. TATTERSALL,
Medical Officer of Health.

March 16th, 1895.

(Large Placard.)

COUNTY BOROUGH OF OLDHAM.

SMALLPOX AND VACCINATION.

Oldham is threatened with a severe visitation of Smallpox.

Persons properly Vaccinated in time, will escape.

You are strongly urged to get all unvaccinated persons in your household Vaccinated as soon as possible.

All vaccinated persons over ten years of age, and, in a household affected with Smallpox, all persons should be Re-Vaccinated.

The Public Vaccinators: Dr. PLATT, of Clegg Street, and Dr. THOMSON, 5, Huddersfield Road, will Vaccinate all persons Free of Charge.

No case of breaking out on the face, arms, and legs, should be overlooked. It is by overlooking slight cases of Smallpox that this outbreak is, in large measure, extending.

CHAS. H. TATTERSALL,
Medical Officer of Health.

COUNTY BOROUGH OF OLDHAM.

MEDICAL OFFICER OF HEALTH'S

REPORT

For the Fortnight ending June 29th, 1895.

CHAS. H. TATTERSALL, M.R.C.S., L.S.Sc., &c.

Table I.

DAILY METEOROLOGICAL OBSERVATIONS, TAKEN AT 10 O'CLOCK A.M.

DATE. 1895	Barometer reduced to Sea Level at 32·0° Farh.	HYGROMETER.			THERMOMETER.						Direction of Wind.	Distance Travelled by the Wind in 24 hours.	Pressure of Wind in lbs. per square foot.	Rainfall.
									Underground.					
		Dry Bulb.	Wet Bulb.	Percentage Humidity. Sat. = 100.	Maximum in Shade.	Minimum in Shade.	Maximum in Sun, Black Bulb in vacuo.	Minimum on Grass.	12in. below Surface.	4ft. below Surface.				
June 16	30·24	62	50	44	62	38	106	32	52	52	W.S.W.	27	...	...
17	30·16	53	49	74	64	43	106	37	54	52	S.W.	46	·02	..
18.....	29·91	52	49	80	60	48	79	46	53	52	S.W.	4	...	...
19.....	29·93	54	48	64	55	38	83	32	52	52	S.S.W.	52	·02	...
20.....	30·18	58	50	57	60	41	88	34	52	52	S.S.W.	28	...	...
21.....	30·43	59	52	61	65	41	102	35	53	52	S.	51	·02	...
22.....	30·47	61	58	82	66	53	100	49	54	52	S.	18	...	...
23.....	30·51	60	60	100	69	55	108	50	55	52	W.S.W.	60	·03	·04
24.....	30·58	62	60	88	64	58	83	57	56	52	S.S.E.	72	·04	·03
25.....	30·54	69	59	53	69	50	93	44	56	53	S.S.E.	53	·02	...
26.....	30·31	72	63	57	78	57	104	50	57	53	S.S.W.	24	...	...
27.....	30·01	59	58	94	78	55	105	51	58	53	S.W.	46	·02	·95
28.....	30·00	63	57	68	63	48	89	42	56	53	S.S.E.	57	·03	·07
29.....	29·78	59	55	76	65	53	95	50	56	54	S.S.W.	127	·14	1·30
Means	30·22	60	55	71	65	48	96	43	54	52	...	47	·02	Total 2·39

County Borough of Oldham.

Health Department, Town Hall, Oldham, June, 1895.

The **Mean Temperature** during the fortnight ending June 29th has been 56 degrees Fahrenheit, against 55 degrees for the previous fortnight. A **Rainfall** of 2·39 inches has been registered, against ·35 inch in the previous fortnight.

The mean reading of the **Barometer** was 30·22 inches, the highest being 30·58 on June 24th, and the lowest 29·78 on June 29th.

There were **136 Births** registered (63 males and 73 females), giving a birth rate equivalent to an annual rate of **25·2** per thousand of population. These include 6 illegitimate births.

There were **99 Deaths** registered (63 males & 36 females), giving a death rate of **18·3** per thousand per annum, against **17·2** per thousand for the previous fortnight, **14·8** for the corresponding fortnight last year, and an average for the corresponding period in the past five years of **21·3** per thousand.

The deaths of children under five years of age numbered 29, being 29·3 per cent. of the total deaths, and included 17 deaths under one year of age, or 117 per thousand births.

The highest death rate for the fortnight, 32·5, occurred in Mumps Ward, and the lowest, 7·1, in St. Paul's Ward.

The average Death Rate for the Fortnight ending June 22nd for the 33 large towns, given in the Registrar-General's returns, was 15·8 per thousand, the rate for Oldham being 18·6 per thousand.

Of the eight Lancashire towns which are included in the 33 large towns Oldham stood 4th, as follows:—

Burnley, 11·8; Blackburn, 15·7; Preston, 16·6; Oldham, 18·6; Salford, 19·4; Bolton, 19·6; Manchester, 20·8; and Liverpool, 24·4.

Table II.

BIRTHS AND DEATHS IN EACH WARD. FORTNIGHT ENDING JUNE 29th, 1895.

WARDS.	POPULATION.	REGISTERED DURING THE MONTH.				ANNUAL RATE PER 1,000 LIVING.			AGES AT DEATH.					
		BIRTHS.		DEATHS.		BIRTHS.	DEATHS.							
	Registrar-General's Est. Pop.	Males.	Femal's	Males.	Femal's		All Causes.	7 Zym'tic Diseas's	Under 1.	1—5.	5—15.	15—25.	25—65.	65 and over.
St. Mary's	11,207	3	8	3	2	25·6	11·6	...	...	1	...	1	3	...
St. Peter's	12,750	7	2	3	2	18·4	10·2	...	...	...	1	...	3	1
Werneth	12,836	3	4	3	3	14·2	12·2	2·0	2	2	..	...	2	...
Westwood	12,443	7	5	2	3	25·1	10·5	...	...	...	1	...	3	1
St. Paul's	11,034	2	3	2	1	11·8	7·1	...	2	1	...	...	...	...
Coldhurst	11,314	4	6	6	4	23·1	23·1	...	3	...	...	...	6	1
Hartford	13,350	8	6	11	4	27·3	29·3	5·9	3	3	1	1	7	...
Hollinwood	8,360	7	9	5	1	49·9	18·7	...	2	...	1	...	2	1
Clarksfield	13,145	5	10	9	2	29·8	21·8	...	3	2	1	...	4	1
Mumps	9,642	4	7	9	3	29·8	32·5	...	1	...	2	1	6	2
St. James's	11,125	6	4	2	3	23·4	11·7	...	...	...	1	1	2	1
Waterhead	13,873	7	9	8	8	30·1	30·1	3·8	1	3	1	1	8	2
BOROUGH	141,079	63	73	63	36	25·2	18·3	1·1	17	12	9	5	46	10

The Causes of Death during the fortnight are shown in detail in Table III. appended, and include :—

Acute Lung Diseases, 22; Phthisis, 11; Heart Disease, 12; and Whooping Cough, 3.

Five Inquests were held during the fortnight, the causes of death being returned as follows :—

Natural Causes, 2; Accidental Fall, 2; Cut-throat, 1.

Of the total 99 deaths 8 occurred in the Workhouse, and 4 in the Infirmary

Infectious Diseases. 39 cases of Infectious Diseases have been notified during the fortnight, viz., Smallpox, 25; Scarlet Fever, 9; Diphtheria, 1; and Typhoid Fever, 4; against Smallpox, 3; Scarlet Fever, 4; Diphtheria, 4; and Typhoid Fever, 2; in the previous fortnight.

There were 13 cases on the books at the last meeting. 37 cases have since become convalescent, died, or have been removed to Hospital leaving 15 cases on the books, viz., Smallpox, 1; Scarlet Fever, 7; and Typhoid Fever, 7.

The particulars respecting nuisances and list of cases for the consideration of the Committee, will be found in the Tables appended.

TABLE III.

COUNTY BOROUGH OF OLDHAM.

Fortnight ending June 29th, 1895.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.

WARDS.	POPULATION. Registrar-General's Est. Pop.		Small Pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	FEVER. Enteric or Typhoid.	FEVER. Typhus.	FEVER. Puerperal.	FEVER. Doubtful.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTAL.
St Mary's	11,207	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	1	4
St. Peter's	12,750	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		5 Upwards.	...	...	...	...	...	..	...	...	...	...	...	...	...	...	1	1	1	...	2	5
Werneth	12,836	Under 5	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	2	4
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2
Westwood	12,443	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5
St. Paul's	11,034	Under 5	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	3
		5 Upwards.	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
Coldhurst	11,314	Under 5	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	3
		5 Upwards.	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	2	...	2	7
Hartford	13,350	Under 5	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	2	6
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	1	1	1	3	9
Hollinwood	8,360	Under 5	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	1	...	...	1	2
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	4
Clarksfield	13,145	Under 5	...	...	...	...	..	...	...	...	...	...	...	...	..	...	...	1	...	...	4	5
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	6
Mumps	9,642	Under 5	...	...	...	...	..	...	...	...	...	...	...	...	1	..	...	...	...	...	...	1
		5 Upwards.	...	...	...	...	...	...	...	..	...	...	...	...	...	..	3	5	...	1	2	11
St. James's	11,125	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
		5 Upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	1	5
Waterhead	13,873	Under 5	...	...	...	1	...	...	...	...	...	..	...	...	...	...	...	1	...	...	2	4
		5 Upwards.	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	3	...	5	12
BOROUGH	141,079	Under 5	...	...	...	1	...	...	...	...	...	...	2	1	1	...	...	8	...	...	16	29
		5 Upwards.	1	...	...	...	1	...	1	...	...	...	1	...	..	...	11	14	12	3	26	70

CASES OF NUISANCES FOR THE CONSIDERATION OF THE COMMITTEE.—JULY 4th, 1895.

No. in Record Book.	Persons Reported.	Situation of Property.	Nature of Complaint.	Remarks.
1523	J Hardman & Co. ...	Court 3, Mulliner Street...	Raise the seats of three closets, &c.	
1524	Do. ...	Do. ...	Fix a door to passage leading to three privies	
1517	John T. Barratt	28, Wallshaw Street	Broken slop-pipe	
1518	Do.	26, Do.	Repair holes in cellar floor	
1519	J. C. Atkins	1, Moorby Street.....	Sewage, &c., in two cellars	
1521	Do.	1, &c., Do.	Defective & blocked drainage	
1525	W. & J. H. Lowe.....	6 & 12, Lordshill Street, &c.	Defective and broken down-spouts	
1434	Do.	3, 5 & 7, York Street, &c..	Dilapidated privy walls	
1435	Do.	130 & 132, Manchester-St.	Broken ashpit wall	
1436	Do.	130 to 136, Do. ...	Dilapidated privies	
1485	Do.	1, North Street	Blocked slop-pipe, &c.	
1486	Do.	Court 1, North Street.....	Broken privy door	
1284	Thomas Smith	1, Ct. 1, Mt. Pleasant-St..	Blocked slop-pipe	
882	James Ogden	74 to 88, Tudor Street ...	Broken downspout and eavesgutters	
1149	William Greenhalgh...	3 & 5, Edge Square	Broken down ashpit walls	
1482	W. Wrigley & Son ...	25, Robinson Street, &c...	Blocked drains	
1514	J. T. Gordon	8, Henfield Row	Blocked drain	
1450	Travis Evans	Booth Hill Mill	Carcases of cats and dogs in water lodge	
1663	John Horrocks	3, Court 4, Henshaw-St....	Keeping poultry in yard	

Table IV.

DEATH RATES IN 33 GREAT TOWNS OF ENGLAND AND WALES.

Cities and Boroughs.	Population.	WEEK ENDING June 1st		June 8th		June 15th.		June 22nd.	
		Death Rate	Zymotic Rate	Death Rate	Zymotic Rate	Death Rate	Zymotic Rate	Death Rate	Zymotic Rate
Birkenhead	107,469	14·6	1·0	14·1	1·9	18 0	1·9	16·5	2·4
Birmingham	496,751	17·4	1·5	14·6	1·8	13·3	1·5	17·1	1·7
Blackburn	127,615	16·8	2·5	20·0	0·8	19·2	2·0	12·3	1 6
Bolton	119,337	21·4	3·1	21·4	5·2	23·6	2·6	15·7	0 9
Bradford	226,3-4	13·4	0·7	11·7	1·2	15·4	0·2	17·0	1·8
Brighton	119,604	20·1	1·7	13·1	0·9	14·4	1·7	12·6	1·3
Bristol	228,139	17·4	0·9	13·7	1·1	14·4	0·9	14·4	1·4
Burnley	99,591	23·0	1·0	25·7	2·1	10·5	2·1	13·1	...
Cardiff	155,637	11·4	0·3	13·7	1·3	11·7	3·0	14·4	3·7
Croydon	114,923	13·6	0·5	11·3	...	10·9	0·5	6·8	...
Derby	100,272	9·9	1·6	11·4	0·5	17·2	2·6	14·6	2·1
Gateshead	95,871	19·6	2·7	17·4	2·2	15·8	0·5	14·7	2·2
Halifax	93,813	14·5	...	15·6	...	14·5	1·1	18·9	0·6
Huddersfield	99,482	14·2	...	14·2	1·0	13·6	2·1	13·6	1·0
Hull	216,722	12·3	0·5	16·4	0·5	15·4	1·7	14·9	1·2
Leeds	395,546	17·5	1·2	13·6	0·4	14·6	0·8	17·4	1·5
Leicester	193,839	13·7	1·6	13·2	1·1	12·1	1·3	14·5	1·9
Liverpool	503,967	27·6	2·0	20·9	2·0	23·8	3·6	25·1	3·8
London	4,392,346	15·5	1·9	14·8	1·6	14·4	2·1	15·1	2·2
Manchester	524,865	23·8	2·8	19·8	1·8	21·3	3·6	20·4	2·4
Newcastle-on-Tyne	207,021	17·9	1·8	15·9	0·3	16·9	1·5	12·8	1·3
Norwich	107,127	14·6	1·9	13·6	1·9	14·1	1·5	12·7	...
Nottingham	226,658	16·8	1·2	12·7	0·5	13·1	0·7	15·2	1·2
Oldham	**141,079**	**20·0**	**1·1**	**19·2**	**1·1**	**15·9**	**0·7**	**21·4**	**1·5**
Plymouth	89,096	21·1	3·5	18·7	2·9	20·5	4·1	19·5	2·9
Portsmouth	174,751	15·8	0·9	10·4	0·9	10 7	0·3	17·9	0·9
Preston	112,638	21·8	0·9	18·1	0·5	14·8	2·3	18 5	3·2
Salford	208,253	18·3	2·0	20·3	3·0	20·5	2·8	18·3	0·8
Sheffield	342,768	19·2	1·8	14·8	0·3	15·8	1·7	16·9	0·5
Sunderland	137,705	18·6	1·9	14·8	0·4	11·4	...	17·0	1·5
Swansea	97,008	17·2	...	12·9	1·1	11·8	1·1	12·9	1·1
West Ham	249,473	14·6	2·1	12·1	2·3	14·4	4·0	15·5	3·3
Wolverhampton	85,780	28·0	4·3	22·5	1·8	15·8	0 6	14·6	3·0

The death-rate in the 33 great towns in England and Wales for the week ending June 22nd, corresponded to an annual death-rate of 16·2, and the Zymotic Rate to 2·0 per 1000 per annum.

Table V.

SMOKE OBSERVATIONS

For Fortnight ending June 29th, 1895.

Minutes of Black Smoke Emitted.	No. of Observations taken.
No Black Smoke	1
Under One Minute	3
One and under Two	3
Two and under Three	3
Three and under Four	4
Four and under Five	1
Five and under Six	—
Six and under Seven	4
Seven and under Eight	1
Eight to Nine (both inclusive)	3
Over Nine Minutes	3
Total Observations taken	26

SMOKE OBSERVATIONS taken during Fortnight ending June 29th, 1895, in which Black Smoke emitted has exceeded 9 Minutes in the Hour.

Date.	Name of Mill, &c.	Where Situated.	Smoke.		
			Black.	Mod.	None.
1895					
June 17	Albert.....	Cromford Street ...	$10\frac{1}{4}$	$11\frac{1}{4}$	$38\frac{1}{2}$
„ 18	Marsland	Green Street	$9\frac{3}{4}$	$9\frac{1}{4}$	41
„ 25	Anchor	Daisy Street	11	$12\frac{1}{2}$	$36\frac{1}{2}$

Table VI.

INFECTIOUS DISEASES. FORTNIGHT ENDING JUNE 29th, 1895.

DISEASES.	CASES NOTIFIED UNDER IMPROVEMENT ACT.													CASES TREATED IN BOROUGH HOSPITALS.								
	BOROUGH TOTAL	ST. MARY'S.	ST. PETER'S.	WERNETH.	WESTWOOD.	ST. PAUL'S.	COLDHURST.	HARTFORD.	HOLLINWOOD.	CLARKSFIELD.	MUMPS.	ST. JAMES'S.	WATERHEAD.	Total Number Admitted.	Admitted from Out-Townships.	Ages of Patients Admitted. Under 5 years.	5—15 years.	Above 15 years.	Discharged.	Deaths.	Remaining in Hospitals. Westhulme.	Moscow.	Cinder Hill.
Small Pox	25	...	1	2	1	...	3	...	...	1	2	3	12	23	...	2	7	14	2	1	...	20	5
Scarlet Fever... ...	9	...	1	...	1	...	...	...	...	5	1	...	1	5	...	3	1	1	1	...	10	...	...
Diphtheria	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever ...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
Typhoid Fever ...	4	...	...	1	...	...	...	...	...	1	1	1	...	1	...	...	...	1	2	...	1	...	...
Cholera	...	..	..	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS. ...	39	...	2	3	2	...	3	...	...	7	5	4	13	29	...	5	8	16	5	1	11	20	5

INSPECTORS' REPORTS.

Total Number of Reports of Nuisances and Notices Served	205
Total Number of Notices complied with...	98
Number of Complaints Received and Visited	57
Re-inspection of Nuisances under Notice	244
Number of Cases dealt with by Sanitary Committee in 1895	282
Number of Cases remaining unabated	69
Number of Cases dealt with by the Magistrates in 1895	40

HOUSES. Total No. Inspected 47.

	Notices Served	Notices Complied With
Dirty	2	3
Damp, Defective Roof, &c.	8	11
Defective Ventilation	—	2
Defective Cellars	7	8
Privy Nuisances	11	14
Ashpits	77	6
Defective Water Supply	8	8
Overcrowding...	—	—
Unfit for Habitation	—	—

DRAINAGE DEFECTS.

	Notices Served.	Notices Complied With.
Blocked Drains	26	22
Defective Drains	18	17
Gulley Traps improperly laid	1	...
Drain inlets untrapped or defectively trapped	7	13
Waste Pipes & Sloppipes directly connected with drain...	10	12
Waste Pipes improperly trapped	14	0
Sloppipe, defective or improperly ventilated	1	11
Defective Water Closets	2	2

No. of Smoke or other Tests 15. No. of Houses Tested 15.
No. of Defects found 13.
114 yards of Channel Tiles and Drainage Pipes have been laid or re-laid since the last Committee Meeting. 19 Traps fixed.

	Visits Paid.	Notices Served.	No. Complied with.
Bakehouses	19	1	1
Dairies and Cowsheds	4	...	...
Farms	4	...	...
Pigsties	29	...	...
Slaughter Houses	107	...	...
Offensive Trades	19	...	2
Mill Lodges	158	5	2
Factories and Workshops	5	...	...

Inspections under Contagious Diseases (Animals) Act	—
Animals destroyed	1
Unsound Food: Meat, Fish, Fruit, &c., destroyed	Lbs. 308
Samples taken under Food and Drugs Act	—
Letters written to Property Owners or Agents, &c.	7
Miscellaneous Visits, &c.	48

Privies Inspected	209
New Privies Built	1
Yards and Passages Repaired and Flagged	6
Erections in Yards Reported	—
Defective Urinals	—
Accumulation of Offensive Matter	16
Carcases of Animals in Water	19
Stagnant Water	7
Manure Heaps	—
Manure Pits built	—
Poultry in Houses	—
Dust and Fly from Mills	—
Low or Defective Chimneys	—
Dangerous Places reported	2
Coal Gas Nuisances and Escapes Reported	2
Dead Bodies removed to Mortuary	—

Visits to Cases of Infectious Diseases	91
Visits to Cases of Phthisis	6
Visits to Deaths under 1 year of age	10
Cases removed to Hospital	29
Houses Stripped and Cleansed after Infectious Disease	5

HOUSES AND CLOTHING DISINFECTED.

Number of Houses Disinfected during the past Fortnight	39
Number of Rooms do. do. do.	133
Number of lots of Clothing Disinfected during the past Fortnight	42
Number of Articles do. do. do.	2091
Number of Articles destroyed do. do. do.	15

NIGHTSOIL AND ASHES DEPARTMENTS.

NIGHTSOIL DEPARTMENT	Fortnight ending June 25, 1895	Previous Fortnight, June 11, 1895
Number of Sanitary Pans in the Borough	23,489	23,485
Do. Iron Tanks, Cesspools, &c. do.	77	77
Do. Water Closets do.	1,141	1,141
Do. Waste Water Closets do.	150	150
Do. Houses represented	30,762	30,758
Do. Sanitary Pans emptied during the night ...	46,360	45,910
Do. Cesspools do. do. ...	10	6
Do. Slaughter Houses from which Butchers' Offal has been removed during the night	208	169
Do. Fish Shops, &c., from which Fish Offal has been removed during the day	382	376
Do. Loads of Excreta collected	527	508
Do. do. Butchers' Offal collected	24	20
Do. do Fish Offal collected	14	14
Do. do. Shoddy Dirt collected.....	255	210
Do. Tons of Manure sent out from Higginshaw...	65	327
Do. do. do. Bower Clough	51	330
Do. Notices received for the removal of Excreta	18	11
Do. Notices complied with during Fortnight ...	18	11
	£ s. d.	£ s. d.
Cost of Manual Labour	143 1 6	138 5 7
Do. Team Labour	57 15 0	63 2 5
Total.....	200 16 6	201 8 0

The above cost includes Manual and Team Labour for Mixing and Loading Manure at Bower Clough and Higginshaw Works.

Table IX.—(*Continued*).

ASHES DEPARTMENT.	Fortnight ending June 25th, 1895.	Previous Fortnight, June 11th, 1895.
Number of Ashpits emptied during the day ...	1800	1449
Do. Other Places collected during the day	1664	1665
Do. Loads of Ashes taken to Destructor...	393	320
Do. do. do. Corporation Tips...	592	396
Do. do. do. Elsewhere	490	542
Do. do. Clinkers removed	115	93
Do. Notices received for the removal of Ashes	4	6
Do. Notices complied with during Fortnight	3	8
	£ s. d.	£ s. d.
Cost of Manual Labour	68 19 8	59 18 2
Do. Team Labour	54 15 0	53 18 9
Total.....£	123 14 8	113 16 11
DESTRUCTOR.		
	Tons. cwt.	Tons. cwt.
Quantity of Ashes, Fish Offal, and Garbage consumed at the Destructor	422 9	384 18
Average per Furnace per day of 24 hours.....	5 17	6 8
Quantity of Mortar Sold.....	54 1	57 8
	£ s. d.	£ s. d.
Cost of Manual Labour	25 7 4	26 10 4