[Report 1897] / Medical Officer of Health, Jarrow Borough.

BOROUGH OF JARROW.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR 1897,

BY

J. M. NICOLL, M.B. & C.M

Jarrow-on-Tyne :

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—

1898.

To the Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I beg to submit my fourth Annual Report on the Health of the Borough,—being the 23rd of the series.

It is very gratifying to report that both the general death-rate and zymotic death-rate are most satisfactory, and that on no previous occasion in the history of the Borough have they been so low. This of itself ought to be sufficient refutation of the reckless statements which have from time to time been made as to the insanitary condition of large numbers of the dwellings in Jarrow.

For detailed information I beg to refer you to the Report.

I am, Gentlemen,

Your obedient servant,

J. M. NICOLL.

Jarrow, Feb. 28th, 1898.

HEALTH REPORT, 1897.

Area of Borough 939¾ Acres.

Density of Population. 39·3 per Acre.

Number of inhabited houses 4,290; seventy having been added during the year.

VITAL STATISTICS.

Population.—Estimated to mid-summer, the population is calculated as being 37,000 or the same as that of last year. This estimate is based on general local conditions, and not according to the method of the Registrar General which would credit us with a population of over 40,000. Probably on the whole the estimate for the year will be under rather than above.

Births.—There were 1,192 births registered in the Borough during the year, equivalent to an annual birth-rate of 32·2 per 1000 of the population. Last year the rate was 28·3, the lowest ever recorded, besides being the first time that our birth-rate fell below that of the average of the 67 smaller towns among which we are grouped; our birth rate being 1·8 per 1000 lower than the average. This year the rate for the 67 towns is 30·1, so that ours is 2·1 higher. Our improved trade conditions will I daresay account for this. Of the registered births forty-two or 3·5 per cent were returned as illegitimate, compared with 2·5 last year.

The following table gives the average birth-rate since 1871 :—

BIRTH-RATES (JARROW).

Mean, 1871-80	45·2
,, 1881-90	40·5
,, 1891-95	34·2
1896	28·3
1897	32·2

Our birth-rates, as throughout the country generally, show a steady decline.

Deaths.—There were 550 deaths registered as having occurred in the Borough during the year. Eleven of these were, however, non-residents and are deducted in calculating our death-rates. To this must be added thirty-four which occurred at Harton Workhouse, among the inmates belonging to Jarrow, and one which occurred in H.M. Prison, Durham, also belonging to Jarrow, giving a total of 574 deaths, equivalent to an annual death-rate of 15·51 per 1000 of the population, as compared with 17·3 last year and 18·3 in '95. On no previous occasion has the death-rate been lower than this, and only once before—in 1894—has it been approached, the rate then being 15·53. The next approach to this is in 1888 with a rate of 17·1. In 1894, when we had till then, the lowest death-rate recorded, it is noteworthy that the rate throughout the country generally, and also in the large and small towns, was also unprecedently low. This year though the rates are also very low for the towns and country, they have not reached the same low level that they did on the previous occasion. This makes our present low rate the more satisfactory, as it shows, that beyond general conditions operating towards a lower death-rate there must also be local influences at work.

The following table gives our death-rates for the last twenty-seven years.

DEATH-RATES (JARROW) PER 1000 OF THE POPULATION.

Mean of Decennium 1871-80	23·9
,, ,, 1881-90	21·1
,, Quinquennium 1891-95	18·1
1896	17·3
1897	15·5

Of the 574 deaths, 291 were males, and 283 emales, a proportion of 1028 males to 1000 females. This proportion is very much lower than last year, and is altogether low.

Coroner's Inquests were held in 55 instances, equal to 9·4 per cent, of the total deaths registered. The percentage last year was 7·3

THE NATURAL INCREASE of the population, or number of births in excess of the deaths was 618, as compared with 415 last year, 452 in '95, and 540 in '94.

In the following table are shown our Quarterly death-rates :—

Quarterly Death-Rates per 1000 of the Population.

	Total Death-rate.	Zymotic Death-rate.	Phthisis Death-rate.	Lung Disease except Phthisis Death-rate.	Infantile Mortality Rate.
First Quarter	15·24	1·29	1·72	3·45	118
Second Quarter	15·02	0·86	1·83	1·83	118
Third Quarter	17·29	4·10	1·08	1·94	187
Fourth Quarter	14·48	0·54	1·40	3·02	157
Year	15·51	1·70	1·51	2·56	146

In looking over the above table the most striking feature is the very high Zymotic Mortality of the third quarter, which was due almost entirely to Diarrhœa. This cause also accounts for the very high Infantile Mortality of the same quarter, and also for the higher general death-rate. During the first quarter the Zymotic Mortality was almost entirely due to Measles, the last of the epidemic of the previous year. The Zymotic Mortality for the other two quarters is exceptionally low the lowest, I believe, registered in any year in the corresponding quarters. The Mortality from Phthisis was highest in the second and first quarters, whilst that from Lung Disease, excluding Phthisis was highest in the first and last quarters of the year.

Death-Rates and Birth-rates per 1000 of the Population throughout England and Wales, 1897.

	Birth-rate.	Death-rate	Zymotic Death-rate.	Infantile Mortality Rate
England and Wales ...	29·7	17·4	2·15	156
33 Large Towns ...	30·7	19·1	2·87	177
67 Smaller Towns ...	30·1	17·2	2·41	169
Jarrow	**32·2**	**15·5**	**1·70**	**146**

In comparing the above statistics it will be noticed that our Mortality-rates are all lower than that of the average town and country rates. In only one previous year—1888—has there been so satisfactory a condition shown.

Infantile Mortality:—There were 175 deaths registered of infants under one year, equal to 30·4 per cent of the total deaths, as compared with 29·5 per cent last year. Of children under five years of age there were 271 deaths, equal to a percentage mortality of 47·2, as compared with 52·7 last year. The Infantile Mortality Rate, or the number of deaths under one year to every 1000 registered births was 146, as compared with 179 last year.

Last year owing to the very high Infantile Mortality Rate I prepared a table showing the chief causes of death in infants under one year. As it was rather instructive and shed a good deal of light on the subject. I have again prepared an almost similar table which is given below.

Causes of Death in Infants under One Year of Age, Jarrow.

Diarrhœa	29	
Whooping Cough	2	
Measles	2	
		—33
Premature Birth	30	
Congenital Debility	18	
Pneumonia	15	
Marasmus	13	
Bronchitis	10	

Tubercular Disease	8
Congenital Syphilis	7
Convulsions	6
Dentition	5
Meningitis	4
Malnutrition	4
Accident	3
Spina Bifida	3
Croup	2
Atelectasis	2
All other diseases	12
	—142
	175

It will be noticed that of the 33 zymotic deaths, no less than 29 were caused by diarrhœa, the total number of deaths from this cause being 42, the disease as usual claiming much the greater part of its mortality from among infants. As regards the general diseases, those causing a very high mortality are much the same as those of last year. Premature birth, Congenital Debility; Marasmus, Convulsions, &c., are all causes of death over which, as was pointed out last year, we have from a sanitary point of view little or no control.

The Ward distribution of the Infantile Mortality was as follows:—East 43, Central 40, South 28, North 27, West 22, Grange 15.
In the following table is given the average Infantile Mortality Rates since 1871.

Infantile Mortality-Rates, Jarrow.

Mean for Decennium		1871-80	175
,,	,,	1881-90	152
,,	Quinquennium	1891-95	151
		1896	179
		1897	146

Deaths and Death-Rates according to Wards.

Ward.	Estimated Population.	Total Deaths and Death-rate.	Zymotic Deaths and Death-rate.	Phthisis Deaths and Death-rate.	Deaths from Inflammatory Diseases of the Lungs & Death-rate.	Deaths of Infants under One Year with Percentage Mortality.
West ...	6450	99 15·34	7 1·08	9 1·39	17 2·63	22 22·22
Grange ...	5500	53 9 63	5 0·90	4 0·72	11 2·00	15 28 30
North ...	5850	94 16·06	11 1·88	7 1·19	14 2·39	27 28·72
South ...	6000	76 12·66	6 1·00	10 1·66	8 1·33	28 36·84
East ...	5900	111 18·81	19 3·22	10 1·69	19 3·22	43 38·73
Central ...	7300	141 19 31	15 2·05	16 2·19	26 3·56	40 28·36

In compiling this table, the deaths which occurred outside the Borough, are considered as having occurred in the Wards in which the patients resided before removal. The unenviable position of the Central, East and North Wards, as regards their excessive mortality is again prominently shown.

In the following table the mortality from various causes is compared for the last three years

Fatal Diseases.

DEATHS.	1895	1896	1897
All Causes	658	643	574
The Seven Principal Zymotic Diseases ...	116	118	63
Smallpox	...	...	..
Measles	34	47	5
Scarlet Fever	4	6	1
Diphtheria, including Membranous Croup ...	9	8	3
Whooping Cough	32	27	7
"Fever"	4	13	5
Diarrhœa	27	17	42
Septic Diseases	4	...	...
Phthisis	68	46	56
Bronchitis, Pneumonia, &c	147	109	95
Heart Disease	30	35	28
Injuries	10	21	19
All Other Diseases	252	278	313

Compared with last year there is a large decrease in all the Zymotic diseases, with the single exception of Diarrhœa, which shows a very onsiderable increase over the last two years. The reason of this is rather difficult to explain, as the summer was not by any means excessively hot, and generally, it is only after a continuance of very hot weather that Diarrhœa becomes epidemically prevalent. Phthisis caused 56 deaths as against 46 last year, the death-rate being 1·5 per 1000 per annum From Disease of the Respiratory System, excluding Phthisis, there were 95 deaths against 109 last year, and 147 the year previous, the death-rate being 2·5 per 1000 per annum as against 2·9 last year and 4·0 in '95. Heart Disease caused a death-rate of ·7 per 1000 per annum as against ·9 last year. There were seven deaths due to influenza, being the same as that of the previous year. Under the heading "Injuries" are included all forms of violent death.

Zymotic Diseases.

There were 63 deaths registered, from the principal Zymotic disease, representing a Zymotic death-rate of 1·70 per 1000 of the estimated population as compared with 3·18 last year, and 3·06 in the previous year. This is the lowest Zymotic death-rate ever recorded in the Borough, the nearest approach being in 1888, when the rate was 1·9

and in 1890 when it was 2·15, It is considerably below the average rate of the towns—a condition which has not occurred previously. In 1894 I pointed out how this rate had been higher than the average town rate and in that year and the following one, briefly stated what in my opinion this was due to. In 1895 it was pointed out. how, though the rate was still remaining higher, it was gradually becoming approximated to that of the average town rate, and then expressed the belief, that the time was not far distant when the rate in Jarrow, instead of being above, would be lower. I did not at that time expect my anticipations would be so soon realised, but now that they have been, I only trust we will continue to maintain the position.

The Zymotic deaths registered were as follows:—

Small-pox.	Measles.	Diphtheria including Membranous Croup.	Whooping Cough.	Scarlet Fever.	"Fever."	Diarrhœa.
..	5	3	7	1	5	42

Comparing the notifiable and non-notifiable diseases, it will be seen that the former constituted 14·3 per cent of the total as against 85·7 per cent for the latter; the death-rate per 1000 of the population being 1·45 for the non-notifiable and ·24 for the notifiable diseases. The percentage mortality of these deaths was as follows:—

Diarrhœa	66·66 per cent.
Whooping Cough	11·11 ,,
Measles	7·93 ,,
"Fever"	7·93 ,,
Diphtheria, including Membranous Croup	4·76 ,,
Scarlet Fever	1·58 ,,

In the following table is shown the Ward distribution of the various deaths from zymotic disease.

Zymotic Deaths, showing the Wards in which they occurred.

	North.	East.	Central	West.	South.	Grange.	Total.
Measles ...	1	3	..	1	...	...	5
Diarrhœa ..	7	13	11	2	6	3	42
Whooping Cough ...	2	1		2	..	..	7
Scarlet Fever ...	..	..	..	1	..	...	1
Typhoid Fever ...	1	1	1	..	..	2	5
Diphtheria...	..	1	1	1	..	...	3
Total ..	11	19	15	7	6	5	63

The East Ward holds the pre-eminence for its high zymotic mortality, being closely followed by the Central, the North not being very far behind; the mortality in these three Wards being equal to 71·4 per cent as against 28·6 per cent for the West, South, and Grange Wards. This is very unsatisfactory, as not only have these Wards a preponderance over all, but with the exception of Scarlet Fever—from which there was only one death—each disease shows an excessive mortality in them.—Thus, of the 5 deaths from Measles, four occurred in these Wards, of the 42 from Diarrhœa, no less than 31 occurred in them, of the 7 from Whooping Cough, five occurred in them, of the 5 from Typhoid Fever, three were in them, and of the 3 from Diptheria, they claimed two. And not only is the Zymotic Rate higher, but the general death-rate holds the same position. Thus while the rate varies from 9·6 in the Grange Ward to 19·3 in the Central, the average rate for the North, East and Central Wards is 18·0, as against a rate of 12·5 for the other three Wards. The question naturally arises "What is this due to!" Is it caused by insanitary conditions of the property, by insanitary surroundings however caused, or by the habits and mode of life of large numbers of the inhabitants? Apart from the fact that these Wards include most of the oldest portion of the town, and consequently the part most difficult to deal with from a sanitary point of view, I believe that the dirty habits and filthy surroundings generated by such habits, and the total neglect of any approach to cleanliness,

together with the mode of living, to be the chief cause of the excessive mortality. Speaking generally the houses are all in a very fair sanitary state, and will compare most favourably with the same class of property in any other town. Unfortunately to these parts flock all the wandering and unstable elements of the population, besides being generally populated by the most dirty and thriftless sections of the community; the sections who look upon cleanliness as approaching the other extreme to godliness, and who accordingly avoid all approach to it in persons and surroundings. Add to this the overcrowding which must occur in spite of all precautions and the lives led by a great number, and one can hardly wonder at the excessive mortality.

The following table compares the zymotic rate, throughout England and Wales, the large and small towns and Jarrow.

Zymotic Death-Rate per 1000 of the Population.

	Mean. 1871-80.	Mean. 1881-90.	Mean 1891-95.	1896.	1897.
England and Wales ..	3·38	2·24	2·01	2·16	2 15
33 Large Towns	...	2·90	2·68	2·88	2·87
67 Smaller Towns	3 84	2·38	2·21	2·51	2.41
Jarrow	**6·14**	**2·6**	**22**	**3·18**	**1·70**

Small Pox.—There was no case notified in the Borough during the year.

Measles.—If we exclude the outbreak at Monkton Schools in the early part of the year, and which really was a continuation of the severe and prolonged epidemic that swept over the Borough towards the latter part of '96, we may congratulate ourselves on having for one year at least escaped this scourge. As regards the outbreak at this school it was met by prompt closure, as soon as it was found that the disease had established itself. This outbreak led to a good deal of correspondence with the School Board Authorities, which, however, need not be further referred to, except to say that as a consequence an arrangement was come to by which the School Board Authorities undertook to furnish the Sanitary Authority with all cases of measles or suspected measles coming under their notice, the Sanitary Authority

to supply them with certificates for the Education Department, showing that the children were, where necessary, excluded at their request. Besides measles, whooping cough, mumps, and chicken pox were added to the list. So far the plan has worked fairly satisfactorily. As to its effect in preventing measles epidemics it is yet too early to say. After the failure of compulsory notification to in any way check this disease, one is not over sanguine as to benefits likely to accrue in this modified form of notification. It is, however, worthy of a fair trial—as is any practical means of checking this disease—and it is more than probable that an opportunity will arise during the ensuing year as from the past behaviour of measles, an outbreak is almost certain to occur.

The results of compulsory notification do not seem to be very satisfactory as of 77 Authorities who adopted it, and gave it a fair trial—that is for five years or longer—up to March last no less than 32, or 41·5 per cent had revoked the order, and of the remaining 45 (as quoted by Dr. Kenwood), 13 are unable to say that it has been of any value, while for 12 some value is claimed or conjectured, but without proof. In only two instances has any statistical value of its usefulness been given In the remaining 18 districts no information had been obtained. The reasons assigned for the revocation are practically the same in all the districts, and briefly are the following —Want of hospital accommodation, besides the practical impossibility of providing sufficient such accommodation during epidemic periods, and even with hospital accommodation the difficulty of dealing with infants and very young children. The great number of cases which are not notified. There is, of course, the expense of notification, which though of secondary importance, is out of all proportion to the benefits which have so far accrued. Finally, and what in my opinion is the most insurmountable difficulty of all, is the extreme infectiousness of the disease in the pre-eruptive stage, a stage in which it cannot be diagnosed and in which the patient is generally able to run about and mix with other children and by so doing spread the disease indefinitely. There were five deaths caused by measles, against 47 last year, the death-rate being ·13 per 1000 as compared with 1·27 last year. For the 67 towns the rate was ·43.

Scarlet Fever. There were 70 notifications received during the

year as compared with 219 last year, and 205 in '95. This is the lowest number received in any year since 1890. The cases were nearly all of an exceedingly mild type. The disease was most prevalent in the early part of the year, 32 of the notifications being before the end of March, the average number for the remainder being 4 per month There was no month in which a notification was not received. Last year the preponderance of the disease was in the last four months of the year The schools did not appear to in any way influence its spread. The Ward distribution of the cases was as follows :—East 15, Central 14, Grange 14, West 12, South 8, North 7. One death occurred in the West Ward, the mortality being equal to ·026 per 1000 of the population, as compared with ·162 last year. The rate for the towns was ·15 The case mortality of the disease was 1·4 per cent. Of the 70 cases, 41 or 58·5 per cent were taken to hospital as compared with 78 cases last year. There was no death at the hospital, the mortality the previous year being 2·5 per cent. For the home treated cases the mortality was 3·4 per cent as compared with 2·8 last year.

Typhoid Fever.—There is also a marked decline in the prevalence of this disease as compared with the last two years, the number of notifications received being 39, as against 66 last year and 50 in '95. February was the only month in which no case was notified. As is generally the case it was most prevalent in the autumn months, 17 of the notifications being received in the months of August. September, and October. The following is the Ward distribution of the cases:—West 12, East 11, Central 5, North 4, South 4, Grange 3. The prevalence of the disease was most marked in the West Ward. This is rather difficult to account for, unless it be that the large ash-pit system is still greatly in vogue there, otherwise, the sanitary conditions of the Ward are exceedingly good. In one group of cases in this Ward, the keeping of a large number of fowls in a small yard in close proximity to the dwelling house, was considered, as at any rate predisposing to the disease. In connection with a few of the cases was found defective and choked yard sinks and drains. In a good number the only apparent cause was the dirty habits and surroundings of the people. In one or two instances secondary infection was without doubt the cause. There

were three or four imported cases. Our milk supplies were carefully watched but did not seem to have any connection with the disease. Regarding our water supply, though there is no cause for directly suspecting it as a source of causation, and though so far as I am aware we have an excellent water supply, I am still doubtful about it, chiefly because it has been abundantly proved to be the most fertile means of spreading this disease, and also because of the constant prevalence, more or less, of the disease all over the district independent altogether of sanitary conditions. This could only occur where we have a general and wide spread infecting agent such as water. In view of the Maidstone experience, and seeing that we are having a new or partly new water supply laid on to the Borough, the Sanitary Committee acted very wisely in appointing a committee to examine and report as to the source of supply of this water. Five deaths were registered as due to typhoid fever, representing a death-rate of ·135 per 1000, as compared with ·351 last year. The "Fever" rate for the towns was ·16. The case mortality was equal to 12·8 per cent as compared with 19 6 per cent last year. Of the 39 cases 19 or 48·7 per cent were removed to hospital, as compared with 26 cases last year. Among the hospital cases the mortality was 10·5 per cent as against 23 per cent last year. Among the home treated cases the mortality was 15 per cent a against 17·5 per cent last year.

Diphtheria.– Of this disease there were 23 cases notified during the year as against 26 last year, and 42 the year previous. The diphtheritic character of a good number of the cases was very doubtful. The following is the Ward distribution of the cases—East 6, North, Central, and West 4 each, South 3, Grange 2. The disease was continuously present during the year, there being no month in which a case was not reported, and the highest number reported in any one month being 3. In a few of the cases defective sanitary conditions were found in the houses, especially where the drains from kitchens or wash-houses were not properly disconnected. School life did not seem to influence the disease. There were three deaths due to it equal to a case mortality of 13·0 per cent as compared with 30·7 per cent last year. The death-rate per 1000 of the population was ·081 as compared with ·216 last year. The rate for the smaller towns was 0·24.

Whooping Cough.—There were seven deaths due to this disease, the lowest number recorded since 1887. The death-rate per 1000 of the population was ·189 as against ·729 last year. In the towns the rate averaged 0·38. All the deaths occurred in children under five years of age, and two were of infants under one year.

Diarrhœa.—There was a greatly increased mortality from this cause as compared with last year, the number of deaths being 42 as against 17, the death-rate per 1000 of the population being 1·13 as against ·459 the year previous. Twenty-nine of the deaths occurred among infants under one year of age, nine in children between one and five years, and four were in persons whose ages ranged from 46 to 76.

The Ward distribution of the deaths was as follows—East 13, Central 11, North 7, South 6, Grange 3, West 2.

Infectious Diseases (Notification) Act.—There were 161 cases of Infectious Disease notified, as against 337 last year and 349 the year previous (see table in appendix). Compared with last year there is a decrease in all the diseases notified, except erysipelas, which showed an increase of four. This is a disease the advantages of whose inclusion in the Notification Act, are extremely doubtful, and one which very many Authorities do not make compulsory notifiable. Personally I am of opinion that no advantage whatever is derived from making it notifiable.

Hospital.—In the following table the Hospital Statistics for the year are given.

Disease.	Admitted.	Recovered.	Died.	Mortality per cent of Admissions.
Scarlet Fever	41	41	—	Nil.
Typhoid Fever	19	17	2	10·5
Total	60	58	2	3·3

Compared with last year there is—as could only be expected from the notification returns—a decrease in each disease admitted. The numbers last year were scarlet fever 78, typhoid fever 26, small-pox—from Hebburn—1, mortality per cent of admissions 7·6.

During the year the caretaker and matron—Mr and Mrs Duthie—resigned their appointment, and in their place Mr and Mrs Williams—the latter a trained nurse—were appointed. The work at the hospital continues to be done very satisfactorily.

Owing to the recent reduction in telephone rates, the question of telephonic communication with the hospital is one which should again be considered by the Committee. Its advantages are obvious and need not be mentioned.

I might again mention the fact that we are still without a disinfector at the hospital, and would point out to the Committee the necessity for such. Now that thoroughly reliable disinfectors, easily worked, can be obtained at a very much cheaper price than formerly, there is not the same excuse for the want of one. I may here quote Dr. Hill, County M O. H., who in a recent report on Isolation Hospitals, says "An apparatus for efficiently disinfecting without injury, not only the clothing and bedding in the hospital *but also similar articles that have become infected in private dwellings is absolutely essential*, if the full advantages of isolation are to be obtained. Fumigation is not able to destroy the disease germs in infecting clothing, and it has for some time been recognised that disinfection by steam is the only reliable method of disinfecting articles of wearing apparel, bedding, &c."

The question of the enlargement of the administrative block is one that must be considered at an early date, as with the wards full, and a proper staff of nurses the accommodation for the staff is very limited.

General Sanitary Work—Insanitary Property.—Owing to the reiterated assertions of a member of the Council as to the exceedingly large number of houses in the Borough, which were entirely unfit for human habitation, a special meeting of the Sanitary Committee was called towards the latter part of the year with the object of visiting these places and having their insanitary condition pointed out. The tour was made under the direction of the member who made the assertions and 15 places were visited with the result that on the return of the Committee there was practically a unanimous vote that not one of the places seen, was in any way approaching the conditions stated to exist, and that the assertions made had no foundation in fact. I

accompanied the Committee and after a careful examination of all the houses visited, can entirely substantiate their action. All the places visited were in a good general condition, and state of repair, and not in any of them was there that dilapidated and tumble down condition which one would expect to find in property so described. In no case was any structural defect pointed out. The yards adjoining the houses were almost all in a satisfactory condition, being either fairly well bricked or cemented. In the greater number of the places visited, the dirty habits of the people were the chief insanitary conditions prevailing. This was very clearly shown by the comparison of two adjacent houses in Lime Street, with exactly the same surroundings where one was occupied by a person of dirty habits, the other by the opposite. The contrast was so marked as to be a matter for comment by nearly all the members. In two or three of the places visited the conditions were absolutely of the best that could be found in property of the description as attested by the Member himself, who on visiting one place in Tyne Street remarked, ' Oh, there is nothing here. I thought there might be." Equally unsuccessful was the visit paid to Short Row, as was also the search in that neighbourhood for a supposed *very* insanitary ash-pit, which however, turned out to have been removed years ago, and an earth-closet substituted. Apart altogether from the tour of inspection I must again assert that our general sanitary condition is as a whole satisfactory. We have certainly a good number of houses not of the most modern description, but that in itself, however objectionable it may be, does not by any means constitute insanitary property unfit for human habitation. Besides. I am not aware that Jarrow has by any means a monopoly of old property. There is no doubt some properties that could be improved. but he is a very poor sanitarian who could not suggest improvements even for the very best of sanitary conditions. Apart, however, from any such Utopian ideas, I don't believe there is any house in the Borough occupied as a dwelling, in itself, in any way approaching such a condition as to be unfit for human habitation. Should any such come under the notice of anyone I think their bounden duty is to at once report it to the Sanitary Authority, a body which, at any rate in Jarrow, has not been lax in immediately taking steps to have such matters put right forthwith.

All old property requires constant looking after so as to keep it in a good sanitary state, and there may occasionally for a time be places and conditions which escape the notice of the Authority or its officers, but on such coming under their notice the necessary steps are at once taken to have the matter rectified.

From Mr Batey's report, which is appended, it will be seen that there has been a good deal of sanitary work done during the year.

Prevention of Nuisances.—Eight convictions were obtained for nuisances arising from earth closets.

Pig Styes.—Those adjoining Salem Street have all been removed, Those on the Pit Heap are in a very filthy condition, the drainage being defective. The condition of this part of the town is very unsatisfactory. The stables are all insufficiently drained, or not drained at all. There is generally no receptacle for the manure with the result that it is piled up anyhow and anywhere outside, and gets blown or kicked about all over the place. Something ought to be done to restore order out of the chaos prevailing there.

Nuisances arising from Animals.—Owing to the filthy conditions arising from the keeping of fowls in yards attached to dwelling houses it was determined, in all instances where such occurred, to insist upon the strictest cleanliness, and in places where the runs or houses encroached on the legal yard space, to insist upon their entire removal.

Scavenging and Removal of Refuse.—The scavenging is not all that could be desired. Last year I mentioned some parts of the town which were not cleansed as often as they might be. I must again repeat what was said on that occasion, and to the districts then mentioned add the lanes adjoining Albion, Stanley, and Burns' Streets, all of which want cleansing very much oftener than is done at present. In fact these congested districts want more attention.

The night soil is being removed more regularly and more cleanly.

Privy Middens.—76 of these removed and 85 earth closets substituted. As will be seen from the Inspector's Report no less than 253 of these have been removed and earth closets substituted within the last three years. This is a record which I think will be bad to beat

by any town in the neighbourhood. When to this it is shown that all this has been done without friction of any kind it speaks volumes for the energy and tact of your inspector, Mr Batey. I know of more than one district where friction arising over this matter, and legal proceedings being instituted, the Sanitary Authority lost their case with the result that there is practically nothing being done.

Exposure of Infected Persons.—There were three prosecutions on this account, in two of which a conviction was got. One was dismissed.

For Precautions against Infectious Disease, for actions under the Foods and Drugs' Act, as well as for Inspection of Lodging Houses, Dairies, Milk Shops, Cow Sheds, &c., &c., see Inspector's Report.

Tables of Deaths during the Year 1897, in the Jarrow Urban Sanitary District, classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics; public Institutions being shown as separate localities.	Mortality from all Causes, at subjoined Ages.							Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.																			
													Fevers.														
	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.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid	Continued	Relapsing.	Puerperal	Cholera.	Erysipelas.	Measles.	Whooping Cough	Diarrhœa and Dysentery	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy	Heart Disease	Tubercular Disease, other than Phthisis	Injuries.	All Other Diseases	TOTAL.
a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
The Borough...	342	174	94	28	31	155	60	Under 5	..	1	3	...	...	0	...	..	..	...	..	5	7	38	0	4	51	1	19	6	134	268
								5 upwds	...	0	0	...	...	3	..	..	..	..	..	0	6	4	7	44	38	26	12	15	125	274
Primrose Hill Hospital	2	...	...	..	1	1	..	Under 5	..	...	...	...	..	0	...	..	..	..	..	..	...	..	...	...	..	...	..	..	...	0
								5 upwds	...	..	..	...	..	2	.	..	..	..	...	..	..	..	...	.	..	..	..	..	...	..	2
Memorial Hospital	5	...	1	1	1	2	...	Under 5	..	..	..	...	..	..	..	..	..	...	..	.	..	...	...	..	...	..	..	1	...	1
								5 upwds	..	...	..	.	...	..	..	...	...	..	..	..	..	...	...	..	..	..	...	4	...	4
Floating Hosp., River Tyne..	1	...	...	...	..	1	...	Under 5	0	..	..	..	..	...	...	...	..	...	..	..	..	...	...	..	..	..	..	...	...	0
								5 upwds	1	...	..	...	..	...	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	..	1
Totals....	550	174	95	29	33	159	60	Under 5	0	1	3	...	...	0	..	..	..	..	..	5	7	38	0	4	51	1	19	6	134	269
								5 upwds	1	0	0	..	..	5	..	..	..	..	..	0	0	4	7	44	38	26	12	19	125	281

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

Deaths occurring outside the district among persons belonging thereto.*	35	1	2	0	2	20	10	Under 5	..	..	..	..	...	..	..	..	..	..	...	..	..	..	..	0	1	0	1	...	1	3
								5 upwds	..	...	...	.	..	..	..	..	..	..	..	..	..	..	..	8	5	2	0	..	17	32
Deaths occurring within the district among persons not belonging thereto.†	11	..	1	..	2	6	2	Under 5	0	..	..	...	..	..	..	.	..	..	..	...	..	..	..	..	..	0	...	0	1	1
								5 upwds	1	..	..	...	..	..	..	..	..	..	..	..	..	..	..	.	..	1	..	6	2	10

*Harton Workhouse 34, H.M Prison, Durham, 1. †The Borough 4, Ships in Tyne 4, Drowned in Tyne 1, Floating & Memoriol Hospital 1 each.

Table of Population, Births, and of New Cases of Infectious Sickness coming to the knowledge of the Medical Officer of Health, during the year 1897, in the Jarrow Urban Sanitary District; classified according to Diseases, Ages, and Localities.

Name of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.												Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.											
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	
	Census, 1891.	Estimated to middle of 1897.							Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.			
(a.)	(b.)	(c.)	(d.)	(e.)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
The Borough	33682	37000	1192	Under 5	..	27	9	..	..	4	...	..	0	..	2	..	..	10	..	..	..	1	..	..	..	..	..	..
				5 upwds	..	43	14	..	..	35	..	..	1	..	25	..	..	31	..	..	..	18	..	..	..	..	..	..
Memorial Hospital ...	.	..	..	Under 5	..	..	..	..	..	..	..	..	..	..	0	..	..	..	..	..	..	..	..	..	..	..	..	..
				5 upwds	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals. ...	33682	37000	1192	Under 5	..	27	9	..	..	4	...	..	0	..	2	..	..	10	..	..	..	1	..	..	..	..	..	..
				5 upwds	..	43	14	..	..	35	..	..	1	..	26	..	..	31	..	..	..	18	..	..	..	..	..	..

Notification of Infectious Disease is compulsory in the District since 1878.

Isolation Hospital situated at Primrose Hill, a short distance outside Borough.

TABLE 3.— Deaths occuring during the year 1897, in the Jarrow Urban Sanitary District, classified according to ages, disease, and the months in which they occurred.

Ages at Death.						Deaths at all Ages.	Months.	Fatal Diseases.																				
Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 upwards.			Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Whooping Cough.	Continued Fevers.			Diarrhœa and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia or Septicæmia.	Puerperal Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	Total.
														Typhus.	Enteric or Typhoid.	Other and Doubtful.												
13	13	1	3	12	7	49	January....	....	5	....	1	.....	2	....	....	....	....	....	2	....	....	....	6	9	....	2	22	49
12	9	3	4	14	2	44	February ..	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	8	11	2	....	22	44
9	6	4	3	13	13	48	March.....	....	...	1	....	....	1	....	....	....	1	....	....	....	....	....	2	12	6	3	22	48
10	10	2	1	16	8	47	April.....	....	....	....	1	.....	1	....	.....	....	....	....	1	....	....	....	7	6	3	2	26	47
14	8	1	5	16	11	55	May.....	....	....	.....	....	....	1	....	1	....	....	....	1	....	....	....	9	8	2	....	33	55
11	5	0	3	12	6	37	June	....	....	....	1	. ...	.....	....	1	....	2	....	1	....	....	....	1	3	3	....	25	37
12	4	0	1	15	7	39	July.....	....	....	.....	....	....	....	....	.....	....	3	....	....	....	....	....	3	5	2	1	25	39
31	13	5	4	12	7	72	August	....	....	....	....	....	.....	.....	1	....	23	....	....	....	....	....	6	3	4	3	30	72
19	8	3	2	12	5	49	September .	....	....	.....	....	....	1	....	1	....	9	....	1	....	....	....	1	10	1	1	24	49
15	7	3	2	13	3	43	October....	....	.....	.....	....	.....	....	....	1	....	2	....	....	....	....	....	4	9	1	2	24	43
17	6	2	2	11	7	45	November..	....	...	.....	.....	....	.....	.....	.....	....	1	....	....	....	....	....	4	10	2	....	28	45
12	7	5	3	11	8	46	December..	....	....	....	.....	....	1	....	.....	....	...	....	1	....	....	....	5	9	2	3	25	46
175	96	29	33	157	84	574	Totals..	....	5	1	3	.....	7	....	5	..	42	....	7	....	....	....	56	95	28	19	306	574

TABLE 4.—Notification of Cases of Infectious Disease received at the Health Office during 1897.

Diseases.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total
Smallpox	...	..	...	..	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	..	...	...	...	...	...	.	...	...
Scarlet Fever	7	13	12	7	1	4	7	1	4	4	3	7	70
Enteric Fever	2	..	1	3	1	6	3	6	4	7	2	4	39
Diphtheria* and Membranous Croup	2	2	2	1	2	2	3	2	2	1	3	1	23
Erysipelas	1	1	2	...	3	2	4	4	1	2	7	1	28
Totals	12	16	17	11	7	14	17	13	11	14	15	13	160*

*There was 1 case of Puerperal Fever notified.

I.—PUBLIC HEALTH ACTS.	No. of Informal Written Notices by Inspector.	No. of Formal Notices by order of Authority.	No. of Nuisances abated after Notice.	General Remarks.
Dwelling-houses and Schools—				76 notices were served on owners of large and insanitary ashpits, after consulting with the owners. After notices had been served they were removed, 85 ash-closets replacing them; thus in three years 253 ashpits have been removed and dry closets substituted without any friction with owners of property.
Foul Conditions	16	..	16	
Structural Defects	21	..	21	
Overcrowding	3	...	3	
Lodging-houses (visited weekly) to limewash	28	..	28	
Dairies & Milkshops occasionally	...	..	..	
Cowsheds ... ditto	6	..	6	
Bakehouses	4	..	4	
Slaughter-houses To Limewash	22	...	22	
Ashpits and Privies	76	2	76	
Deposits for Refuse and Manure	12	..	12	
Water Closets	4	..	4	
Defective Yard Paving	43	7	43	
House Drainage—				
Defective Traps	7	..	7	
No disconnection from Sewers	12	...	12	
Other Faults	110	..	110	
Water Supply	35	..	35	
Pigsties	12	..	12	
Animals Improperly Kept ...	6	...	6	
Offensive Trades	...	...	...	
Smoke Nuisances	1	...	1	
Other Nuisances	135	...	135	
Totals	553	9	553	161 notices of Infectious Disease were received. On receipt of each certificate the house was visited, and the person in charge got a copy of directions as to disinfecting, isolation, &c., drawn up by M.O.H. On ascertaining what school, if any, the children attend, a notice is given to the Clerk of the School Board, so that children may be prevented from attending school from an infected house. 60 persons were removed to the hospital, in each case the room is fumigated if possible, all bed and body linen is ordered to be washed and disinfectants used, which is supplied by the Corporation.

10 persons were summoned under Bye-Law 3 for the Prevention of Nuisances for permitting liquid filth to run from box-closets into back streets :—
2 were fined 1s. and 6s. costs each
6 „ 2s. 6d. „ 6s. „ „
2 withdrawn.

II.—WATER, FOODS AND DRUGS.	No.	Remarks.
Seizures of Unwholesome Food...	3	
Convictions for exposing or selling unwholesome Food	3	Food Adulteration was, Milk :— One, 17 per cent of added water, fined £5 and costs.
Samples of Food and Drugs taken for Analysis	43	
Samples of Food found Adulterated	3	One, 10 per cent fat extracted One, 8 „ „ „ Each fined £2 and costs
Samples of Water taken for Analysis		Both the latter samples were sent to Somerset House and Analyst's certificate was confirmed.
Samples of Water condemned as unfit for use		

III.—PRECAUTIONS AGAINST INFECTIOUS DISEASE.		
Lots of infectious bedding stoved or destroyed		All houses wherever possible, if patient not removed to hospital kept under observation, till properly recovered, then the room or rooms are thoroughly cleaned etc.
Houses disinfected after Infectious Disease ...		
Schools do. do. do. ..		
Prosecutions for exposure of infected persons or things	3	One was fined 10s. and costs One „ „ 5s. „ One was dismissed
Convictions for do. do. do.	2	

EDWARD BATEY, INSPECTOR OF NUISANCES

February, 1898.