1883.

BOROUGH OF  SUNDERLAND.

ANNUAL REPORT

ON THE

HEALTH AND SANITARY CONDITION

OF

SUNDERLAND.

ALFRED EDWIN HARRIS,

L.R.C.P. & S., Ed., F.C.S., F.R.G.S.,

MEDICAL OFFICER OF HEALTH AND BOROUGH ANALYST.

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1884.

BOROUGH OF SUNDERLAND.

HEALTH COMMITTEE.

Chairman:

COUNCILLOR THOS. J. RICKABY.

Vice-Chairman:

COUNCILLOR STANSFIELD RICHARDSON.

ALDERMAN BELL.
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,, ERRINGTON.
,, FAIRLESS.

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,, RICHARDSON, E.
,, RUDLAND.
,, SMITH, M.D., R.A.
,, STILES.
,, THOMPSON.
,, WADDLE.
,, WALKER.

Meetings every alternate Thursday, at 7·30 p.m. Accounts at 7·15 p.m.

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APPENDIX.

To the Mayor, Aldermen, and Councillors, acting as the Urban Sanitary Authority for the Borough of Sunderland.

Gentlemen,

In compliance with the regulation of the Local Government Board, I have pleasure in presenting my Annual Report for your consideration.

It will be noticed that many new and important Statistical Mortality Tables are appended to it, while in the body of the Report I have also embodied others which I deemed of value. As far as possible information has been compiled for the previous ten years, so that you may easily compare last year's statistics with these of the ten preceding years.

A Disease Map of the Borough is also appended, together with a Meteorological and Disease Chart.

I am, Gentlemen,

Your obedient Servant,

ALFRED E. HARRIS,

Medical Officer of Health.

Health Office,

Sunderland,

May 1st, 1884.

REPORT.

THE estimated population of the Borough for the year just closed is 121,117 persons. This calculation is based on the increase between the census returns of 1871 and 1881. REPORT, 1883. Population.

The Medical Officer of Health has estimated the populations in the five registration sub-districts as follows:—

Sunderland East	9,696
Sunderland West	6,243
Bishopwearmouth North	37,406
Bishopwearmouth South	40,585
Monkwearmouth	27,187
Whole Borough	121,117

The natural increase of the Borough, that is, the excess of births over deaths, was 2,093.

The area and density of the population of the Borough and of the five registration sub-districts is submitted in the following table. Area and Density.

District.	Area in acres.		Density of Population per acre.
Sunderland East	178	....	55·3
Sunderland West	33	....	192·3
Bishopwearmouth North	861	....	44·1
Bishopwearmouth South	1,258	....	32·8
Monkwearmouth	633	....	43·6
Whole Borough	*2,963	....	41·5

In estimating the density of the population, it is assumed that all portions are built upon. This, however, is not the case, and the density of the districts and the Borough is therefore considerably greater than it appears.

* This area is exclusive of tidal waters and foreshore.

BIRTHS.

REPORT, 1883.

Births.

During the year 1883, there were 5,054 births registered in the Borough. These were equal to an annual birth-rate of 41·7 per 1,000 inhabitants, calculated on an estimated population of 121,117 persons. This rate is 0·7 above the average rate for the last ten years, in which period it was only exceeded in 1873, 1875, and 1878, when the rates were respectively 45·1, 42·7, and 41·8. The actual number of births in the year was 5,054—2,543 males and 2,511 females,—whereas the average number during the ten preceding years was 4,526. It exceeded the number of births registered in 1882 by 163.

In the Registration Sub-districts.

In Sunderland East there were 382 births, which represent a birth-rate of 39·3. In 1882 the rate was 37·1.

In Sunderland West there were 262 births, and the rate was 41·9. In the previous year the rate was 39·5.

In Bishopwearmouth North, 1,583 births were registered, and the birth-rate was 42·3, compared with 43·0 in the preceding year.

In Bishopwearmouth South, which is the most populous of the five districts, there were 1,605 births, and the birth-rate, which in 1882 was 38·9, rose to 39·5.

There was also an increased birth-rate in Monkwearmouth. In 1882 it was 43·9 (a very high rate), but this figure was increased to 44·9 last year. The number of births was 1,222.

In the Four Quarters.

The births in each quarter were as follows :—1st quarter, 1,266; 2nd quarter, 1,277; 3rd quarter, 1,288; 4th quarter, 1,223. The births were, therefore, very evenly spread over the year.

Quarter.		Births.		Birth-rate.
1st	....	1,266	....	41·8
2nd	....	1,277	....	42·1
3rd	....	1,288	....	42·5
4th	....	1,223	....	40·3
Whole year	....	5,054	....	41·7

Fuller information will be found in Tables I., II., and IX. in the appendix.

DEATHS.

Deaths.

An examination of the number of deaths reveals the unsatisfactory facts that they are considerably in excess of the average number for the previous ten years, and produce a death-rate which is also in excess of the average rate for the same period. Nevertheless, the number of deaths and the resulting death-rate are below those of 1882. The statistics will also be found to exhibit some most satisfactory features, which clearly denote an improved sanitary condition of the town, such as a decrease in the death-rate among infants, a decreased zymotic rate, and a decrease in the deaths from summer diarrhœa. The rate was considerably swollen by the terrible calamity at the Victoria Hall, which prematurely deprived 178 little children of their lives.

The number of deaths, including the Victoria Hall deaths, was 2,961, and the death-rate was 24·4. The deaths, less those at the Victoria Hall, were 2,783, and the death-rate 24·0 per 1,000 inhabitants. This should be reckoned as the real mortality rate for the year.

The diseases which principally helped to produce this rate were typhus fever and pulmonary diseases in the first quarter, and, to a smaller extent, smallpox in the fourth quarter. The full data for accurate comparison will be found in Table IIIA.

In the Four Quarters.

The number of deaths and the death-rate in each quarter were as follows :—

Quarter.	Deaths.	Death-rate.
1st	842	27·3
2nd	663	21·5
3rd	833*	27·1
4th	623	20·2
Whole year..	2961	24·4

The Victoria Hall deaths were registered in the third quarter, and considerably swelled the death-rate. The rate without these was 21·3. From this table it will be perceived that deaths

* The Victoria Hall deaths were registered in this quarter. The deaths, less these, were 655, and the rate was 21·3.

from ordinary causes steadily decreased during each quarter. It will be remembered that the year 1882 closed with a heavy mortality in the Borough, which was continued into the early part of the year. If the average mortality of the last three quarters had obtained during the first quarter the rate for the Borough would have been 21·3 per 1,000 inhabitants.

Ages at Death.

Of the 2,961 deaths, 697, or 23·5 per cent., were of children under one year old, against 904, or 28·7 per cent., in 1882. Premature birth was the cause ascribed to 88 of the 697 deaths, or 12·6 per cent. Many of these deaths were not certified by medical practitioners, but by midwives, who very frequently lack the knowledge and skill to start the little one on the road of life. The question of skilled attendance on poor women is one that is daily demanding more and more attention. In many of our large towns Lying-in Hospitals are carried on with much success, relieving poor mothers in the time of their greatest distress, and providing for them a place where they can be confined in privacy and quietness, and amidst cleanly surroundings, instead of the greatest publicity, under the very gaze of their little ones, and amidst the greatest confusion.

Maternity institutions are also patronised in other places, from which skilled medical attendance can be obtained by the respectable poor, who are thus saved from the stigma of pauperism which is attached to parish medical relief. There are institutions of far less utility and necessity which receive a large share of public support. These suggestions are thrown out with the hope that some of the charitable ladies of the borough may take them up. It is essentially a woman's subject, and one which should enlist their earnest sympathies.

There were 439 deaths under five years, but over twelve months old, which represent a percentage of 11·4 of the total deaths.

1,136, or 39·2 per cent., of the deaths were under five years.

There were 696 persons, or 23·5 per cent. of the deaths, over 65 years of age.

The relative mortality of infants to the total births was at the rate of 137·8 deaths to every 1,000 infants born. This was the lowest rate, with one exception, in the 28 large towns of the Kingdom. So far as it goes, it is eminently satisfactory, for the infantile mortality rate is generally considered a fair test of the sanitary condition of a town and of the surroundings of the people. The average rate in the large towns was 156 per 1,000 children born.

Infantile Mortality Rate

In public institutions, such as the Workhouse, the Infirmary, and the House of Recovery, there were 303 deaths, which represent a percentage of 10·2 of the total deaths.

In Public Institutions.

There were 347 inquest cases. This large number was due mainly to the Victoria Hall calamity.

The following table has been compiled to show the number of deaths at certain periods of life, the number of persons living at these ages, according to the last census return, and the death-rate per 1,000 among persons living at these ages.

Age.	No. of persons living.	Deaths.	Death-rate per 1,000.
Under 1 year.....	3,633	697	191·8
1 and under 5 years	13,563	439	32·3
5 ,, 15 ,,	27,415	337	12·2
15 ,, 25 ,,	22,159	164	7·3
25 ,, 35 ,,	17,650	198	11·2
35 ,, 45 ,,	13,316	213	15·9
45 ,, 55 ,,	8,947	217	24·2
55 ,, 65 ,,	5,912	269	45·5
65 ,, 75 ,,	3,011	261	86·6
75 ,, 85 ,,	861	135	156·7
85 ,, 95 ,,	80	30	375·3
95 and upwards ..	2	1	500·0

In the Districts.

The death-rates in the five registration sub-districts into which the Borough is divided, ranged from 23·2 in Monkwearmouth to 27·5 per 1,000 in Sunderland West.

Sunderland East.

The number of deaths registered in Sunderland East was 226, as compared with 317 in 1882, and 183 in 1881. The

death-rate for the year was 23·3, while in 1882 it was 33·1, and 1881, 19·6. It must be recollected, however, that the year 1881 was a most exceptional year, not only here, but in all England.

Sunderland West.

The mortality in Sunderland West was 173, or 27·5 per 1,000 inhabitants. High though this rate undoubtedly is, it compares favourably with the previous year, when the rate was 37·9, and in 1881, 28·0. The deaths in the latter years were 231 and 170.

Although there were only 399 deaths registered in Sunderland East and West (Sunderland Parish), yet a return furnished to the Medical Officer of Health by the Union authorities discloses the unsatisfactory fact, that out of a total of 223 deaths in the Union Hospitals, no less than 90 of the deceased persons had been removed from that district. This would make a total of 489 deaths in the Parish of Sunderland, and would raise the death-rate from 25·4 to 30·6 per 1,000 inhabitants.

The improvements effected under the Town Improvement Bill have, no doubt, considerably reduced the mortality in the district. In the report for 1875, the late Medical Officer of Health remarked that a few years previous to that date the rate of mortality used to be 30·0 per 1·000 (not including the deaths of persons at the Union, who were removed from the district), whereas in the year of which he was speaking it was only 24·6. This reduction was not to be wondered at, when it is recollected that many of the old fever dens had been swept away, close lanes had been widened, and narrow alleys had been opened up. Nevertheless, much remains to be done. The deaths for the ten years (1873-82 inclusive) give an average rate of 25·0 per 1,000 inhabitants; and if to these are added the deaths of persons who removed to the Workhouse, the mortality rate would be very largely increased.

Many years ago, this was the best part of the town—in fact, it was Sunderland. The houses were strong and substantially built, and were inhabited by persons of high social grade. Now, there is a great change. Many of the houses from age have become more or less dilapidated, and are occupied, not, as formerly,

by one family, but often by five, six, and even seven families. Many of them lack means for the disposal of ashes, and possess neither middens nor water closets. Others of them possess small yards, placed between houses which are almost back to back, and in these are the middens, which it is impossible to empty, save by wheeling their contents through the houses themselves. The condition of Sunderland Parish requires anxious consideration, and will, no doubt, receive great attention during the year from the Health Committee, when its members have before them a special report on the tenemented property of the Borough which the Medical Officer will shortly present to them.

Bishopwearmouth North.

In Bishopwearmouth North, the mortality, amounting to 946, was higher than in the preceding two years, when it was 927 and 790. The rate was 25·2, which is slightly less than the average rate (25·6) for the previous ten years. The deaths include 223 which occurred at the Workhouse, and embrace the following deaths from places outside the Borough boundary—

Ford (South Hylton) ..	1	Ryhope	3
Fulwell.....	1	Tunstall	1
Hylton (North)	2		
Southwick	11		19

The remaining 204 deaths were referred to the following districts—

Sunderland Parish.....	90
Bishopwearmouth (North and South)	92
Monkwearmouth	22
	204

Deducting these from the total deaths, the mortality was 723, and the death-rate 19·3. This, too, is under the average rate for the district (less, deaths in the Union) for ten years. The House of Recovery, in which there were 15 deaths, is also situated in Bishopwearmouth North.

Bishopwearmouth South.

The deaths in Bishopwearmouth South numbered 985, and produced a death-rate of 24·2. This rate is higher than the average for the ten previous years. It must not be forgotten

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that the terrible Victoria Hall Disaster occurred in this district, and in itself alone created a district death-rate equal to 4·2 per 1,000 of its inhabitants. But for this accident, the rate would have been 20·0, or exactly 2·2 per 1,000 less than the average for the previous ten years. There were also 65 deaths in the Infirmary, without which the rate would be further reduced to 19·2 per 1000.

Monkwearmouth.

The mortality rate in Monkwearmouth was in excess of the average of the preceding ten years. There were 631 deaths, which yielded a death-rate of 23·2 per 1,000 inhabitants. The rates in the previous two years were 27·7 and 21·5.

Table giving the death-rate in the districts for the year 1883, together with the rates for the previous ten years, with and without the deaths in the Union Hospital and the Infirmary; also the average rate for the ten years (1873-82).

Years.	Sunderland East & West.	Bishopwmth. North.		Bishopwmth. South.		Monkwearmth.
		Whole District.	Less, Deaths at Union.	Whole District.	Less, Deaths at Infirmary.	
1883	**25.4**	**25·3**	**19·3**	**24·2**	***19·2**	**23·2**
1873	25·7	24·9	18·8	21·9	20·6	19·1
1874	26·6	23·6	21·7	26·5	22·4	18·5
1875	24·6	24·6	20·4	23·3	22·0	17·4
1876	21·5	23·6	19·0	19·4	18·1	19·1
1877	22·8	25·9	20·6	20·6	19·3	20·5
1878	29·3	28·6	23·5	23·4	22·0	22·0
1879	20·0	25·3	20·0	22·5	21·4	18·5
1880	20·4	32·4	26·5	22·4	20·8	23·4
1881	23·8	22·0	17·1	19·0	18·0	21·0
1882	35·5	25·2	20·8	23·2	22·1	27·7
Avrge. for 10 years.	25·0	25·6	20·8	22·2	21·6	20·7

* This is also less the Victoria Hall deaths.

THE QUARTERLY DEATHS.

REPORT, 1883.

Deaths in the Four Quarters.

The highest mortality occurred in the first quarter of the year. At this period the high mortality which began in 1882 was brought to an end, and during the remaining quarters of the year the rate had a steady downward tendency from ordinary causes; so that whereas the deaths in the first quarter numbered 842, with a death-rate of 27·9, the mortality in the last quarter was only 623, and the death-rate 20·6.

In the third quarter, the death-rate from ordinary causes was 21·6, and the mortality, 663. The terrible calamity at the Victoria Hall, however, swelled the deaths to 883, and the rate to 27·6.

The following table has been compiled for comparative purposes, and shows the number of deaths in each quarter for last year, and the ten preceding years.

Years.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Whole Year.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Dths	Rate.
1883	842	27·9	663	22·0	*883	*27·6	623	20·6	2961	24·4
1873	669	26·6	540	21·2	578	22·1	554	21·4	2341	22·9
1874	600	23·1	517	20·1	619	24·0	699	26·8	2435	23·4
1875	707	26·7	559	21·2	588	22·2	531	20·0	2385	22·5
1876	522	19·4	511	18·9	605	22·5	624	23·1	2262	21·6
1877	655	23·8	633	23·1	578	21·0	621	22·6	2487	22·7
1878	670	24·0	737	26·3	782	27·9	672	24·1	2864	25·8
1879	703	25·0	651	23·1	556	19·5	597	20·8	2507	22·2
1880	650	23·0	649	22·8	812	29·0	790	25·1	2901	25·2
1881	681	23·4	574	19·8	588	20·2	593	20·4	2436	20·8
1882	683	23·1	659	22·2	840	28·3	964	32·5	3146	26·4
Averge 10years	654	23·81	603	21·87	654	23·67	664	23·68	2576	23 35

* The rate in this quarter was increased by the 170 deaths in the Victoria Hall. The deaths from ordinary causes were 663, and the death-rate, 21·6.

Table showing the classified causes of deaths in each of the Four Quarters.

	Quarters.				Whole Borough
	1	2	3	4	
I—Specific Febrile or Zymotic Diseases-					
1—Miasmatic Diseases	79	46	35	64	224
2—Diarrhœal	2	7	55	21	85
3—Malarial	..	..	..	..	..
4—Zoogenous	..	..	..	..	..
5—Venereal	8	7	5	5	25
6—Septic	7	4	5	4	20
II—Parasitic Diseases	1	..	..	..	1
III—Dietic Diseases	2	1	1	2	6
IV—Constitutional Diseases	117	105	89	99	410
V—Developmental	63	61	54	50	228
VI—Local Diseases—					
1—Diseases of Nervous System	123	100	100	85	408
2—Diseases of Special Sense	..	..	..	..	..
3—Diseases of Circulatory System	60	49	58	49	216
4—Diseases of the Respiratory System	219	118	82	109	528
5—Diseases of the Digestive System.	38	45	50	46	179
6—Diseases of the Lymphatic System	..	..	..	..	..
7—Diseases of Glandlike Organs of Uncertain Use	1	..	1	..	2
8—Diseases of the Urinary System	14	10	8	11	43
9—Diseases of the Reproductive System—					
(a) Organs of Generation	3	4	..	1	8
(b) Diseases of Parturition	5	6	5	3	19
10—Diseases of Bones and Joints	3	5	2	7	17
11—Diseases of Integumentary System	2	4	5	2	13
VII—Violence—					
1—Accident or Negligence	31	27	198*	17	273
2—Homicide	1	..	..	..	1
3—Suicide	1	3	1	1	6
VIII—Ill-defined and not specified causes	62	61	79	47	249
Totals	842	663	833	623	2961

* These included the Victoria Hall deaths.

ZYMOTIC DISEASES.

Deaths from Zymotic Diseases.

The zymotic statistics are, to a great extent, looked upon as the test of the sanitary condition of a town, and properly so; for, generally speaking, they are in a large measure promoted by filth, whether it be of the neighbourhood, the street, lane, alley, or house. During the last two years, the Health Committee have largely increased their staff, for the purpose of more effectively and quickly cleansing the streets and the middensteads; and it is in the highest sense satisfactory to note, notwithstanding that typhus fever was raging heavily in the early part of the year, and that smallpox was constantly present in the third and fourth quarters of the year, that the zymotic fatality was lower than it has ever been previously in the Borough. It was also below the average rate in the twenty-eight large towns of England, in which the rate was 2·7. In Newcastle it was 4·3.

Death-rate.

The death-rate for the year from the seven principal zymotic diseases was 2·5, the actual number of deaths being 309.

The mortality and death-rates from these zymotic diseases since 1872 are given in the annexed table.

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1883	**309**	**2·55**	1877	366	3·35
			1878	728	6·54
1873	324	3·17	1879	401	3·55
1874	455	4·38	1880	739	6·43
1875	393	3·72	1881	318	2·63
1876	445	4·14	1882	700	5·87

In Table V. in the appendix will be found fuller statistics of the deaths from the principal zymotic diseases.

Zymotic Deaths in the Four Quarters.

Notwithstanding the swollen mortality and the presence of such zymotic diseases as typhus and measles in the first quarter, that term only holds second place as regards zymotic fatality. The deaths registered in each quarter were as follows—

Quarter.	Deaths.	Death-rate.
1st	81	2·6
2nd	53	1·7
3rd	90	2·9
4th	85	2·4

In the previous year the numbers were—1st quarter, 102; 2nd quarter, 87; 3rd quarter, 239; 4th quarter, 274.

In the third quarter, 53 of the deaths were caused by summer diarrhœa, and 14 by smallpox.

Zymotic Deaths in the District. Sunderland East.

In Sunderland East, 18 deaths were registered from infectious diseases, viz., 3 from smallpox, 2 from scarlet fever, 1 from whooping cough, 4 from enteric fever, 2 from continued fever, and 6 from diarrhœa and simple cholera. These deaths were equal to a death-rate of 1·8 per 1,000 inhabitants of the district. In the previous year there were 84 deaths, while the zymotic death-rate was 8·79. In 1881 the rate was 1·1 per 1,000 inhabitants.

Sunderland West.

Sunderland West was credited by the district registrar with 17 deaths, which produced a death-rate of 2·7.

In calculating the deaths from Sunderland Parish, as a whole, it must not be forgotten that many persons were removed to the hospital at the Union, and died there, who should properly be credited to this district. In proportion to its size and population, this district sends—as we may reasonably expect, the population being poor—a larger number of patients to the Union than any other district.

The deaths were caused by the following diseases—

Smallpox	0	Whooping Cough	2
Measles	2	Enteric Fever	2
Diphtheria	3	Diarrhœa	8

Bishopwearmouth North.

Bishopwearmouth North exhibited the highest mortality from these diseases. There were 131 deaths, representing a death-rate of 3·5 per 1,000. No less than 33 of these deaths were credited to typhus fever, which is a disease that is not at all prevalent in the district. The great majority of these were of persons who had been removed to the Union Hospital from other districts. Many of the smallpox deaths also really belonged to other districts.

The following is a summary of the deaths from zymotic diseases in the district—

Smallpox	42	Typhus Fever	33
Measles	4	Enteric Fever	9
Scarlet Fever	10	Continued Fever	1
Diphtheria	7	Diarrhœa	20
Whooping Cough	5		

The zymotic deaths in the previous year numbered 182, and the death-rate was 8·4 per 1,000 inhabitants. In 1881 the rate was 2·00.

Bishopwearmouth South.

There were 64 deaths in Bishopwearmouth South from the zymotic diseases, resulting in a death-rate of 1·5 per 1,000 of

its inhabitants. Again, as in the two previous years, the zymotic fatality was least in this locality. The rate in 1881 was 1·4, and in 1882, 3·9. The deaths in the latter year numbered 159.

The deaths for 1883 arose from the following diseases—

Smallpox	6	Whooping Cough	8
Measles	1	Typhus Fever	3
Scarlet Fever	13	Enteric Fever	7
Diphtheria	7	Diarrhœa	19

Monkwearmouth.

Monkwearmouth ranges second on the list in order of zymotic fatality. There were 78 deaths, which represents a rate of 2·8 per 1,000.

This rate is lower than in the previous two years, and is chiefly owing to the marked subsidence of whooping cough, which has hitherto been very fatal in Monkwearmouth. The zymotic rate in 1881 was 3·8, and in 1882, 8·1 per 1,000 inhabitants.

In the year just concluded, the deaths arose from the following diseases—

Smallpox	1	Typhus Fever	5
Measles	9	Enteric Fever	10
Scarlet Fever	13	Continued Fever	1
Diphtheria	1	Diarrhœa	32
Whooping Cough	6		

Summary of the deaths from zymotic diseases in the five districts.

District.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough	Typhus Fever.	Enteric Fever.	Continued Fever.	Cholera (English)	Diarrhœa.	Total.	Death-rate.
Sunderland East	3	..	2	..	1	..	4	2	1	5	18	1·8
Sunderland West	..	2	..	3	2	..	2	..	..	8	17	2·7
Bishopwearmouth North	42	4	10	7	5	33	9	1	..	20	131	3·5
Bishopwearmouth South	6	1	13	7	8	3	7	..	..	19	64	1·5
Monkwearmouth	1	9	13	1	6	5	10	1	1	31	78	2·8
Total	52	16	38	18	22	41	33	4	2	83	309	2·5

SMALLPOX.

REPORT, 1888.

Smallpox.

In the Medical Officer's last annual report it was noted that one death had occurred in the Borough during the year, the case having been removed to the Union Hospital from the Rural District, and that eight other cases had occurred in the Borough, the origin of which with one exception, had been traced to infection derived from without the Borough. Fuller particulars of these cases will be found on page 24 of the Report for 1882.

At this time, smallpox existed to a large extent at Newcastle-upon-Tyne, Gateshead, and Seaham Harbour, so that Sunderland, being placed between these places, and having hundreds of its inhabitants visiting them daily, and *vice versâ*, was greatly exposed to the disease. Every effort was made by the Health Department to obtain early information of any case that might arise in the Borough. There was, however, no new case reported until the end of February, and on March 1st the Medical Officer of Health reported to the Health Committee that—

March 1st.

> The deaths in the previous fortnight included one from smallpox at the Union Hospital. This man was removed from a common lodging-house at 10, Church Street, Sunderland Parish, the same day on which the eruption appeared. He had only arrived in the Borough two days previously, having come from Jarrow and Gateshead.

It was at the latter town he had contracted the disease.

At the same meeting, the Medical Officer reported as follows—

> I have to report that two cases of smallpox have come under my notice. The first case occurred at 4, Fleet Street, Hendon. The patient, a woman, evidently caught the disease from a man from Seaham Harbour, who had been living in the house, and who had been under treatment for 'a pustular rash,' but which had not been recognised as smallpox.* However, there can be little doubt that it was, for within a fortnight of his visit this woman showed symptoms of the disease. This person would not consent to be removed to the Hospital.
>
> The other case occurred at 23, Bridge Street. The attacked person is a railway porter, just arrived from Gateshead. He informs me that since his departure smallpox has made its appearance in the house in which he resided there. There is no doubt he contracted the disease at Gateshead. He is now in the House of Recovery.

* The Medical Officer of Health learned afterwards that the medical attendant was in doubt as to the real nature of the eruption.

At the next meeting of the Health Committee (March 15th), the Medical Officer reported again as follows :—

Smallpox Continued. March 15th.

At present I have seven patients in Hospital with smallpox. They were removed from the following places—23, Bridge-street (four cases), Potts-street (two cases), Hope-street (one case).

The cases from Bridge-street contracted the disease from the person whom I reported at the last meeting.

The origin of the Potts-street case is obscure, but I have a suspicion that they have been visiting at Seaham Harbour, where the disease is very prevalent. The parents of these children did not wish to allow them to enter the House of Recovery, owing to the unfavourable impression which the debate in the Council on the Hospital had left on their minds. I trust, in the face of a threatened epidemic of smallpox, that this impression will not extend widely, for, however unsuitable the building may be for isolating *different* fevers, there can be no doubt it can accommodate smallpox patients.

March 31st.

At the Health Committee of March 31st, the following was the report on smallpox—

A fresh case of smallpox has been found at 23, The Parade. The patient—a child—caught the disease from ———, of Fleet-street, about whose wife I reported on a previous occasion.

Here the disease was contracted through the husband, who had removed from his own house for his own, as well as the public, safety, having foolishly visited his wife, from whom he conveyed the infection to his lodgings.

April 12th.

Another report, submitted to the Health Committee by the Medical Officer of Health on April 12th, said—

Two new cases of smallpox have come under my notice at 23, The Parade, Hendon. They belong to the same family as the case reported at the previous meeting of this Committee. The parents would not consent to the children's removal to Hospital. The Inspector and myself have visited the house several times to see that there is no intercourse allowed with neighbours.

A case of smallpox exists at Reynoldson-street.

How disease is spread.

This case was never reported to the Health Department, but it was ascertained after death that he had contracted the infection, in travelling from Newcastle to Sunderland, from a person who had not completely recovered from the disease.

April 26th.

At the next meeting of the Health Committee, April 26th, the following report was submitted—

Woman caught travelling.

A woman and her child were admitted to the House of Recovery since last meeting. These were caught at the Railway Station, and, the woman being found with smallpox scales on her face (a condition most highly dangerous to the public), they were taken to the House of Recovery. Her statement is to the effect that her husband drove her from home. [This was afterwards proved to be untrue.] She came to Sunderland from Seaham Harbour.

This woman was afterwards prosecuted, and fined £5.

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Smallpox Continued. May 10th.

At this time the known cases in the Borough were very few, and there were only two patients in the House of Recovery. Indeed, at the next meeting (May 10th) of the Health Committee, the following favourable report was submitted—

The only new case of smallpox that occurred in the Borough, of which I have knowledge, was reported from 21, Eglinton-street North. The patient, I believe, caught the infection from a brother who lived at Seaham Harbour, where he had been suffering from supposed "cowpox." The man was removed to the House of Recovery.

May 24th.

In the next fortnight there were four new cases, the history of which is interesting when following step by step the course of the disease in the Borough. The Medical Officer reported to the Committee, May 24th—

Since the last meeting of the Committee, the following cases of smallpox have come under my notice.

(1) D—— H——, aged 13, 21, Eglinton-street. In this case the infection was caught from her brother, whose case was reported at the last meeting. She had been re-vaccinated after the appearance of the disease in the house, and the smallpox was of the mildest type. The parents would not allow her removal.

A child concealed in a house by the servant.

(2) Miss C—— H——, unvaccinated, 60, at 1, Albion-place, died on the 19th inst. She caught the disease from a young lad named (3) Berry, 8½ years old, the child of the servant. This youngster, it appears, complained of feeling unwell five weeks ago, while he was living at 14, Waterloo-place. His mother took him to Miss H——'s house, where she kept him for the night, unknown to her mistress. The next day the child was still ill, and presently smallpox made its appearance. The mother then became frightened, and feared to declare what she had done, and kept the lad in the kitchen, where she nursed him. I have searched carefully for the origin of the disease in this lad, but I cannot discover it.

It is sad to think that this lady never knew how she contracted the disease—or that she was so cruelly treated by a servant in whom she had placed extraordinary confidence. It is strange to think that this woman, who so basely deceived her mistress, should afterwards have been sought out by an elderly gentleman and placed in a position of responsibility as his housekeeper, on the ground that a woman who had exhibited so great a regard for her child was deserving of the greatest sympathy and trust. The report continued—

(4) A girl, 5 years, unvaccinated, at 13, Aubrey-terrace, was also reported. She caught the infection probably from the servant, who has been in the habit of visiting frequently at Seaham Harbour. She was treated at home.

(5) W—— T——, 19 years, vaccinated, 63, Eglinton-street, was reported on the 21st, and removed the same day to the House of Recovery; and, on the same date, Inspector McKay found (6) J —— Y——, 38 years, at 8, Eglinton-street, suffering from smallpox in its

incipient stage. He was also removed to the House of Recovery. In all likelihood, these cases arose from H——'s, at 21, Eglinton-street, which is only a short distance from each house.

In every instance the people have been given printed instructions, advising the steps they should adopt to prevent the disease spreading, and containing the penalties they are liable to under the Public Health Act for exposing infected clothing, &c.

June 7th.

Once more Seaham Harbour has to bear the responsibility of sending disease into the Borough, as may be learned from the following report, dated June 7th—

Since the last meeting, as already mentioned in the Council, this disease broke out at Blue House Grange, Hendon, whither it had been carried by a girl named M—— B——, 15 years old, who, with her parents, arrived from Seaham Harbour a short while previously, and took a room in the Grange. At the time she was shedding smallpox scales freely. Strange to say, her parents never suspected it was this disease, and never called in a doctor, thinking it was "water jaggs"—a local name for chicken-pox. This girl played about with the other children living at the Blue House, and, subsequently, two children—Charles and Elizabeth T——, aged 12 and 9—contracted smallpox from her. These cases were removed to the Union Hospital immediately.

The girl from whom these cases were contracted, it appears, attended a chapel, while in this state of infection, and on two occasions, at least, sat in a crowded pew with other persons.

June 21st.

In the next fortnight a case was found in the other extremity of the Borough—at 42, Southwick-lane, and it appears from the Medical Officer's report, June 21st, that—

The patient, J—— J——, had lived at Commercial Road, where she had contracted the disease from the T——s. She was removed to the Hospital the same afternoon.

At this time a man, who had contracted the disease from an unknown source, was removed from a common lodging-house, 5, Cumberland-street.

August 2nd.

The next reports have an important bearing on the spread of the disease in the Borough. The first is dated August 2nd, and reads as follows—

One death from smallpox occurred at 34½, South Johnson-street. The history of the disease is obscure. A sister of the deceased had had an eruption on her body, which the parents thought little of, as the child was "in no way ill." After her recovery, her sister was attacked with a similar eruption in an aggravated form, and she died of confluent smallpox. This is the only case in the fortnight of which I have any information.

The Inspector and Medical Officer visited this house at once. The father was warned not to allow any one into his rooms. The people living near were also cautioned, and every

REPORT, 1883.

Smallpox Continued.

precaution was taken to prevent the spread of the disease. At the time of the visit a man was sitting in the room with the corpse. He did not consider he was running any risk, and became quite annoyed when it was suggested that he should leave the house, as he did not live there.

August 16th.

The report submitted to the next meeting (August 16th) will show how these instructions were followed.

In my last report, I mentioned that there had been a death from smallpox at 34½, South Johnson-street. Since then, I regret to say, 16 cases have made their appearance in the Borough. Of this number, 11 can be directly traced to that case, while the origin of the others is uncertain. The Q——n family was ordered by the Inspector and myself to allow no person to enter the house, but, from what has been gleaned, this order was disobeyed. The cases directly traced to this origin are—

J—— K——n,	21 years,	30, North Johnson-street.
J—— K--g—n,	24 ,,	36, North Johnson-street.
Eliz. L——s,	12 ,,	24, Water-street.
M. Q——n,	10 ,,	20, Hope-street.
Eliz. G——n,	17 ,,	8, Farrington-street.
J-— McA——e,	26 ,,	65, William-street.
T—— K——y,	25 ,,	4, Glass-street.
J—— S——h,	14 ,,	37, North Johnson-street.
C—— R——y,	1 yr. 3 months,	34, North Johnson-street.
M—— M——m,	25 years,	6, Back Farrington-street.
Geo. G——y,	26 ,,	16, Clanny-street.

In addition to these, the following cases have occurred, whose origin is unknown, and who live at the extreme limits of the Borough.

A Girl,	18 years,	27, Fowler-terrace, Hendon.
A Man,	59 ,,	11, Woodbine-terrace, Pallion.
,,	28 ,,	25, Brougham-street.
,,	35 ,,	12, Alfred-street.
A Woman,		7, Back Picard-street.

Of these 16 cases, 10 have been removed to the House of Recovery and 2 to the Union. The remainder have refused to enter any hospital, although urged very earnestly to do so.

In every instance where the patients were removed, the house has been thoroughly disinfected and cleansed, the middens emptied and disinfected; the bedding and other clothing have either been destroyed or brought to the Corporation Hot-Air Chamber for disinfection. The people in the houses were also urged to be re-vaccinated.

These cases teach a great lesson that compulsory notification of diseases is essentially necessary, but whether it should be given by the parents or guardians, or by the Medical Profession,

does not matter much. In these cases it would have been the duty of parents or guardians if compulsory notification existed, to have informed the Sanitary Authority, for it appears they had no medical advice until too late. If, however, they had been compelled under a penalty to report infectious diseases they would, in all human probability, have found their way to the Health office long before they did, and the cases would have been removed to Hospital, for the people among whom the first cases occurred are the very class who are most easily prevailed on to enter hospital, more especially if they are offered free treatment. With so many cases existing in the Borough, it was only natural that the next fortnightly report should be unsatisfactory, and in it nineteen new cases were reported, of which seven were removed to the House of Recovery, nine to the Union Hospital, and three would not consent. So far, the number of cases removed to hospital may be considered satisfactory, when it is recollected that so much prejudice existed in the minds of the public towards the two available institutions.

September 13th.

In the fortnight ending September 13th, twenty-three new cases came under observation, of which seven were removed to the Union, and eight to the House of Recovery. Eight remained at home, on their medical attendants' advice, for treatment. Two of these being infants under six months old. One of the cases—that at 13, Tunstall-vale—was not reported, and its existence was therefore unknown until the patient was almost convalescent. Four of the cases occurred in one family ; the first case was only discovered through the mother carrying one of the children to the Dispensary for treatment for what she supposed to be "water jaggs," or chicken-pox. At this date (September 13th) there were 34 patients under treatment in the two Hospitals, 16 in the House of Recovery, and 18 in the Union Hospital.

The following report was submitted to the Committee, and it shows how ignorantly or thoughtlessly people among the working classes act.

Inspector McKay reports that on August 29th he found M—— W——, in whose house a case of smallpox had occurred, washing infected clothes in the public wash-houses. From what I can gather, the woman seems to have been ignorant of the gravity of her offence.

REPORT, 1883.

Smallpox Continued. September 27th.

She was afterwards summoned and fined a nominal penalty.

In the next fortnight (September 27th) smallpox showed no notable decrease, and seventeen cases were reported to the Committee, of which seven could only be induced to seek hospital shelter. Thirteen of the cases occurred in Bishopwearmouth North district, in which the major portion of the cases had already appeared, one of them was located in Bishopwearmouth South, and three in Sunderland West.

October 11th.

During the next fourteen days a slight decline occurred in the number of cases, and the Medical Officer reported fourteen new cases on October 11th. Bishopwearmouth North supplied eleven of these, while there was only one case in Bishopwearmouth South, and one in Sunderland West. The difficulty to induce patients to enter hospital continued as they would not enter the Union, and the House of Recovery could not accommodate them.

October 25th.

In the next report, dated October 25th, in drawing attention to a particular death—that of the mother of the Vicar of one of the churches—the Medical Officer wrote as follows—

> This lady's case is peculiar, as she never went out, except, occasionally, to church, and then she passed directly from her house to it. The inference is that she caught the infection there. That this is not improbable is borne out by the fact that on Sunday morning last a new case of smallpox was reported to me as existing at Cross Green-street, whither a case had been removed some time previously. On enquiring the whereabouts of the father, I was informed he was *at church*. The people had two rooms—a living room and a sleeping room—and the patient was running about from room to room. Now here is a great danger to the public to have a man, with no possible means of keeping his clothing free from the infection of smallpox, mixing with them. I think if any measures can be taken against such careless persons it ought to be done, although I do not ask for an order in this case, and also against persons who wilfully expose themselves to the infection by visiting their friends when ill, because through their foolhardiness, they not only endanger their own lives, but most unfortunately the lives of other people. I am tired of warning people so caught.

At this meeting a letter was read from a medical gentleman, which is referred to later on in the Report, under the heading of the Prevention of Disease, and which, in the opinion of the Medical Officer of Health, was the means of throwing serious difficulties in his path when attempting to grapple with the disease.

Twenty-eight fresh cases of smallpox were also reported; nineteen of which occurred in Bishopwearmouth North, six in

Bishopwearmouth South—the largest return hitherto in this district, three in Monkwearmouth, and three in Sunderland West. Only eleven of these could be persuaded to enter hospital, seven going to the House of Recovery and four to the Union.

Smallpox Continued.

The epidemic continued to increase, so that in the fortnight ending November 8th, there were 34 new cases reported to the Health Committee, with the remark that, as a rule, they were of a very mild type. Nearly all the severe cases have been unvaccinated. Every one of the thirty-four cases was advised to enter hospital, and of these, twenty-four were prevailed on to do so, nine entering the House of Recovery, and fifteen the Union Hospital.

November 8th.

Severe cases unvaccinated.

At the meeting of the Health Committee on November 22nd, the Medical Officer of Health—

November 22nd

Regretted to inform the Committee that the cases of smallpox show a marked tendency to increase. The number of cases reported during the fortnight was 53, compared with 34 in the previous fortnight. The disease must therefore be said to be now epidemic. The number of cases in the districts that have come under my observation is as follows—

Serious increase in the disease.

Sunderland East	1
Sunderland West	4
Bishopwearmouth North	28
Bishopwearmouth South	10
Monkwearmouth	10
	53

I continue to receive the hearty support of the medical profession, who are, as a body, inclined in every way to assist the Health department.

This was the first occasion on which the cases appeared in all the districts of the borough. It was followed by a fortnight, which presaged a largely increased number of cases, for it was apparent to the Medical Officer that if once the disease fastened on Sunderland Parish—where the people are poor, the houses old, and the sanitary surroundings inferior—it would spread more rapidly than it had hitherto done.

Cases simultaneously in all parts of the Borough.

Smallpox Continued.

The five cases in Sunderland Parish were followed in the ensuing fortnight by 9 new cases in the same district, and in all the districts there were 50 new cases. Sunderland East, 4; Sunderland West, 5; Bishopwearmouth North, 14; Bishopwearmouth South, 10; and Monkwearmouth, 17.

The cases in Monkwearmouth caused considerable anxiety, owing to the character of the people among whom the disease prevailed. Nine of these patients were removed to Hospital, while, from the five districts, only half the cases—25—could be prevailed on to enter the hospital. Nineteen were removed to the Union, and 6 to the House of Recovery.

December 6th.

At the meeting at which these cases were reported (Dec. 6th), the Medical Officer said—

Where compulsory removal is necessary.

I wish to draw attention to a case at Factory-yard, where already several cases have occurred. In this instance the patient, a man, suffered from smallpox of a mild type; he had only once been visited by a medical man, who advised him to go to hospital. When I saw him he was sitting in the only room, which he and his family rented. The door was open, and one of his children was running in and out of the house. I advised him—not having proper accommodation for the isolation of the disease—to consent to his removal to hospital, but he declined. Afterwards, I visited other houses in the yard, and before leaving I saw his wife in conversation with other women. I think in such cases as this the compulsory removal powers under the Public Health Act should be enforced.

The Committee made no order on the subject.

December 20th.

Sixty cases of smallpox were notified to the next Committee meeting (Dec. 20th). Again, considering its small size, Sunderland Parish had a very large number of cases—10. The heaviest incidence of the disease was, however, in Bishopwearmouth North, where there were 27 new cases. Monkwearmouth followed with 14, and Bishopwearmouth had 9 cases. In all there were 60 cases.

At this meeting, the Medical Officer gave another instance of how smallpox is spread.

How smallpox is spread through lack of isolation.

The danger which arises from persons, suffering from smallpox, is clearly shown by the following facts which came under my notice. At 18, Barrack-street, lived a family of three—a mother and two girls—occupying one room. One daughter first caught the disease in a very mild form. The mother declined to allow the patient to be

Smallpox continued.

removed. Afterwards, the elder sister took ill, in a confluent type, and was removed to the Union Hospital. In the same house lived a lad upstairs, who was also attacked. A doctor was not called in, the case was never reported, and the lad died of suppressed smallpox. Subsequently, an inquest was held. In the same house, a fourth patient—a semi-confluent case—was discovered on Sunday, but the mother would not allow the patient's removal to hospital, and up to the time of discovery never had had medical advice.

Necessity of compulsory removal.

It is much to be regretted that the Health Committee did not give the Medical Officer liberty to remove cases. He clearly saw the necessity of possessing the compulsory power in dealing with the disease, and it was this that induced him, on August 30th, to call attention to the powers conferred on the Authority by the 124th section of the Public Health Act. It is repugnant to the feelings of all persons to force patients from home in times of illness, but there are times and occasions when the health of the community, and the common welfare of the public, may justly demand some sacrifice at the hands of individuals. Such a time clearly occurs when a virulent disease such as smallpox breaks out in a tenemented property. It cannot be isolated there. To attempt to do so is only to play with the disease. Smallpox cannot be exorcised from a house or from a town. Stern, repressive measures are necessary for its extinction.

The last fortnight of the year found the epidemic still pursuing its course, and showing an increasing number of cases—17—in Sunderland Parish. Of these, 7 were in Sunderland East, and 10 in Sunderland West. Besides these cases, 16 were reported in Bishopwearmouth North, 3 in Bishopwearmouth South, and 2 in Monkwearmouth.

At the close of the year the disease showed no signs of abatement, and it promised to increase.

In the following table (see next page) will be found particulars of the cases and deaths which occurred during the year. It also gives the districts in which the cases occurred, and to which the deaths of persons in hospital should be referred.

REPORT, 1883.

Smallpox continued.

Fortnight ending	Sunderland East.		Sunderland West.		Bishopwth. North.		Bishopwth. South.		Monkwearmouth.		Union. Deaths.		House of Recovery Deaths.		Totals.	
1883.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Borough.	Rural District.	Borough.	Rural District.	Cases.	Deaths.
Jan. 14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
„ 28	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Feb. 11	1	1	..	..	..	..	..	..	..	..	1	..	..	..	1	1
„ 25	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	..
March 11	..	..	..	..	5	..	1	..	..	..	..	..	..	..	6	..
„ 25	..	..	..	..	3	..	..	..	..	..	..	..	..	..	3	..
April 8	..	..	..	..	..	1	3	..	..	..	..	..	1	..	3	1
„ 22	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1
May 6	..	..	1	..	..	..	..	..	1	..	..	..		..	2	..
„ 20	..	..	..	..	..	..	2	..	1	..	..	..	..	..	3	..
June 3	..	..	..	..	..	..	5	1	2	..	..	..	..	..	7	1
„ 17	..	..	..	..	1	..	2	..	1	..	..	..	..	..	4	..
July 1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
„ 15	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..
„ 29	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..
August 12	..	..	..	..	15	1	2	..	..	..	..	..	..	..	17	1
„ 26	..	..	..	..	6	2	1	..	..	..	..	..	1	..	7	2
Sept. 9	..	..	..	..	15	3	4	1	6	..	3	..	1	..	25	4
„ 23	1	..	..	..	18	3	2	1	1	1	2	..	..	..	22	5
Oct. 7	..	..	2	..	13	3	..	..	..	..	..	..	2	..	15	3
„ 21	1	..	3	..	14	3	6	..	2	..	..	..	2	..	26	3
Nov. 4	1	..	1	..	18	3	8	2	4	..	..	..	1	..	32	5
„ 18	4	..	2	2	29	4	12	..	6	..	3	..	2	..	53	6
Dec. 2	5	..	4	..	15	5	7	2	12	..	5	..	2	..	43	7
„ 16	9	3	2	2	20	1	10	1	21	2	3	..	1	..	62	9
„ 30	6	..	4	..	20	2	6	..	5	1	2	1	..	..	41	3
Whole Year ..	28	4	19	4	194	31	76	9	62	4	19	1	13	..	379	52

Altogether there were 379 known cases of smallpox in the Borough. It is not at all probable that these by any means represent the actual amount of the disease. Many cases were of so mild a type that they were not attended by medical men, and, consequently, the Health department remained in ignorance of their presence for a long while, or until discovered by accident, or in tracing back the origin of a particular case, and it is therefore very probable that there were numerous others whose existence never came to light. There were 52 deaths among patients from the Borough, which represent 13 per cent. of the known cases,

in itself a small rate, but when it is recollected that all the cases were not known, the death-rate from smallpox must be considered satisfactory.

Smallpox Continued.

There are several important questions respecting vaccination, and its power for good on smallpox, which the Medical Officer thinks best not to deal with, except at the close of the epidemic, when all the facts and figures are before him. Lest his silence might be misconstrued, he deems it expedient to affirm that, so far, all the weight of evidence appears entirely favourable to the good results of vaccination and re-vaccination.

MEASLES.

Measles.

Measles, which in 1882 caused 191 deaths, fell to 16. Two of these occurred in Sunderland West, 4 in Bishopwearmouth North, 1 in Bishopwearmouth South, and 9 in Monkwearmouth. This year was no exception to the apparent rule in the Borough that the disease assumes a fatal form in alternate years. Altogether 34 cases came under observation.

SCARLET FEVER.

Scarlet Fever.

This disease, which for many years has been a perfect scourge to the Borough, showed less virulence than in any year since 1873. During the previous ten years it had carried off 1,555 persons, mostly children, which gave an average of 155 deaths per annum. Last year, only 38 deaths were ascribed to it.

District Mortality.

It was equally fatal in Bishopwearmouth South and Monkwearmouth, in each of which districts it carried off 16 children. Ten died in Bishopwearmouth North, and 2 in Sunderland East.

In a report presented to the Health Committee on March 29th, in speaking of the deaths from infectious diseases, the Medical Officer had occasion to refer to a death from scarlet fever at Dundas-street, thus--

How it is spread.

Again, looking at scarlet fever, there was a death at Dundas-street. Here three other cases of the same disease were found. Cross-examination of the parents revealed the fact that the infection had been caught at a house in Back Dundas-street. This information proved correct, for there were two cases there, and it turned out that the children first mentioned had been frequently in the house. This visiting is a cause of disease against which Sanitary Authorities cannot fight with

any degree of success. Until people—poor people, especially—learn that disease too often means death, and that they risk not only their own lives, but also their children's lives, in entering rooms where infection exists—until then will these deaths occur, and until then will the most approved sanitary schemes prove abortive in stamping out from the communities.

The town has indeed been fortunate in having so few visits from so bad a companion, but the Medical Officer, as he stated in one report (December 6th), despairs—

Of seeing it effectually checked until we are able to get the disease under hospital shelter for its perfect isolation, and until there is a power to compel parents to notify infectious diseases. It is the mild cases, *unattended* by medical men, that cause the greatest mischief, for the parents ignorantly allow their children to run about before they are completely recovered.

Compulsory notification of disease is much more required at the hands of parents and guardians than at the hands of medical practitioners.

Districts.

The Health department obtained information respecting 121 cases during the year, viz.—

Sunderland East	4
Sunderland West	0
Bishopwearmouth North	33
Bishopwearmouth South	44
Monkwearmouth	40

:oincidence of decline of Scarlet Fever Mortality and Night Midden Emptying.

It is not a little remarkable that the decline in the number of deaths from scarlet fever was coincident with the change of emptying ashpits from day to night time. The alteration came into operation on the 1st May, and since then there has been a steady decline in this fever. Thus, in the first six months there were 27 deaths, and in the last half of the year only 11 deaths. The Medical Officer, when advocating the change in the ashpit cleansing system, pointed out that this would be a probable result. It is too soon, however, to judge definitely of it.

DIPHTHERIA.

Diphtheria.

To this disease 18 deaths were attributed. It had never appeared to any large extent in the Borough, nor does it seem, as a rule, to propagate itself readily in large towns. Perhaps, with the exception of Portsmouth, in recent years there has been no serious epidemic such as periodically occurs with diseases

like scarlet fever, measles, smallpox, and other fevers. In the case of Portsmouth, however, the disease assumed the dimensions of a heavy epidemic. The first cases could not be traced to any very definite source, but, unfortunately, the poison after a time got into the sewers, which contained large lodgements of filthy matter, a good breeding formed, and thence it found its way into the houses. The Portsmouth epidemic ought to serve as an admonition to all Sanitary Authorities to keep their sewers under constant supervision.

In the 18 cases which were certified as causing death, no satisfactory origin could be ascertained. The Medical Officer is constrained to think that some of these deaths arose from diseases other than the true membranous diphtheria.

Three cases occurred in Sunderland West, 7 in Bishopwearmouth North, 7 in Bishopwearmouth South, and 1 in Monkwearmouth.

WHOOPING COUGH.

Whooping Cough.

During the previous ten years, the deaths from whooping cough numbered 752, which gave an annual average of 75 deaths. Last year, it is satisfactory to note that this disease was only fatal in 22 instances. It has generally been very fatal in Monkwearmouth. In 1882, it caused 53 deaths in that district alone. Last year the number fell to 6. The deaths in the other districts were—Sunderland East, 1; Sunderland West, 2; Bishopwearmouth North, 5; and Bishopwearmouth South, 8. The cause of this diminution in the death-roll is not easily understood. This disease is not easily controlled, except in few instances, by the persons in whose family the disease has appeared, and then it can only be done by the complete isolation of the patient—a course which, the Medical Officer need hardly say, is altogether beyond the power of the working classes, and which even the "upper ten" are loathe to adopt, because even they have not a proper respect for the disease. Rich and poor alike do not consider the number of deaths it causes annually. 752 deaths in ten years in Sunderland alone is not a record to be made little of.

Districts.

TYPHUS FEVER.

REPORT, 1883.

Typhus Fever.

When the year 1882 closed, typhus fever was more or less prevalent in the Borough. Its history for that year is fully recorded in the Medical Officer's Annual Report. On February the 1st it became his duty to report to the Health Committee as follows :—

Spring Garden Lane.

I regret to say that cases of typhus fever continue to occur in Spring Garden-lane. About five weeks since, I had all this lane inspected, and the condition of things was very unsatisfactory, principally owing to the dirty habits of the people, who will not take the least trouble to keep their places clean.

Since October, 17 cases of typhus fever have occurred in Spring Garden-lane, all of which were, at various periods, removed to the Union Hospital. Of these cases, 9 occurred at No. 33, of whom 7 belonged to one family.

1 case	occurred at	No. 2,	Spring Garden-lane.
1 ,,	,,	16	,,
1 ,,	,,	29	,,
1 ,,	,,	32	,,
2 cases	,,	5	,,
2 ,,	,,	12	,,
9 ,,	,,	33	,,

The fever first made its appearance at No. 33, and from this source it spread to persons who visited those attacked.

The first person seized was a man of intemperate habits, who, having received a severe wetting, was attacked with the fever.

How people invite death.

As an instance of the risk people in his position* in life will sometimes run, I may mention the case of a young man whose cousin was ill. I found him in the room with the patient, and requested him to leave. He did so, but said he thought it was hard that a chap would not be allowed to sit with his cousin. This man was soon afterwards attacked himself.

He died in the Union Hospital!

It is thus disease is spread, misery produced, and death invited. Facts, which plainly teach how ignorance or carelessness leads to disease and death, cannot be too often put before the people by Medical Officers of Health, whose Reports reach the hands of the public. It has been the aim of the Medical Officer to do this to a larger extent than usual in this Report.

At the Health Committee of March 29th, the Medical Officer took the opportunity, in commenting on the high death-rate, to speak as follows—

This death-rate (27·0 for the fortnight), I need not point out, is very high. Nevertheless, it presents one satisfactory feature—a feature I have noticed once or twice this year—that the deaths from the so-called "preventable" or zymotic diseases continue small in number. It is against the occurrence of these deaths that Sanitary Authorities make their most stringent efforts of suppression, and it is therefore well that

* A labourer.

special attention should be attracted to the deaths from these diseases. But while I must be pleased at the small amount of zymotic disease, yet when I examine how some of these people came by their deaths, the result is not so pleasing. Taking the two deaths at the Union from typhus, I find that one of these persons was removed from 6, Thomas-street, Monkwearmouth, and had caught the disease from his wife. Now, she had been visiting people at Spring Garden-lane, and, strange as it may appear, she did not even know these persons' names, yet that she had been there on more than one occasion is certain. Now, the mischief was not confined to her own family, for she brought the disease to her father's family, living in Hedworth-place, 6 of whom (including the head of the family) were attacked, fortunately with non-fatal results—a circumstance, I believe, entirely due to their cleanly habits. Again, the other death at the Union was due to infection caught by a mother in looking after her son, a man of intemperate habits.

Districts. How disease is spread.

Looking back at the cases of typhus fever that have occurred during the past six or eight months, I have come to the following conclusions as to the causes of much of it. (1) Personal squalor, dirty clothing saturated with exhalations from the skin; (2) a reduced state of the system, resulting from underfeeding, destitution, and other debilitating causes, such as drinking; and (3) close contact with the disease, or with the clothing of infected persons.

The following cases came to the knowledge of the Sanitary Authorities.

Sunderland East	2
Sunderland West	17
Bishopwearmouth North	8
Bishopwearmouth South	8
Monkwearmouth	18

There were 41 deaths during the year, of which 21 occurred in the first quarter. There were no deaths in Sunderland Parish, bnt this is accounted for by all the cases having been removed to hospital from the district. Several of these patients afterwards died in the Union Hospital.

ENTERIC FEVER.

Enteric Fever.

There was a diminution in the number of deaths (33) compared with the previous year, when there were 42. These are, however, slightly in excess of the average of the previous ten years. There were hardly any cases of this fever reported to the Sanitary Authority, although it is a disease which very frequently arises from faulty sanitary fittings in houses, and a knowledge of whose existence might lead to beneficial interference by the Medical Officer of Health.

REPORT, 1883.

Enteric Fever (continued).

The following is a summary of the cases which came to the knowledge of the Health department.

	Known Cases.		Deaths.
Sunderland East.....	6	....	5
Sunderland West	7	....	2
Bishopwearmouth North	24	....	9
Bishopwearmouth South	17	....	7
Monkwearmouth	17	....	10

CONSTITUTIONAL DISEASES.

Constitutional Diseases.

This great class includes such diseases as cancer, consumption, scrofula, and all ailments of a tubercular nature.

Phthisis.

Phthisis was, by far, the most fatal of these complaints. It caused 236 out of a total of 410 deaths, arising from constitutional causes. This was a slight falling off compared with 1882, when there were 247 deaths.

During the last ten years, the mortality from this disease in the Borough has been considerable, of which full particulars are given in the following table.

Year.	Deaths.	Percentage of total deaths.	Per 1,000 of population.
1883	**236**	**7·9**	**1·9**
1873	212	9·0	2·0
1874	185	7·5	1·7
1875	177	7·4	1·6
1876	221	9·7	2·0
1877	212	8·5	1·9
1878	211	7·2	1·9
1879	219	8·7	1·9
1880	224	7·7	1·9
1881	188	7·7	1·6
1882	247	7·8	2·0
Average of 10 years..	209	8·1	1·8

From this table it will be perceived that the death-rate from phthisis is almost identical with the average rate for the previous ten years.

Phthisis (continued).

Out of a total of 236 deaths, 68 occurred in the 1st quarter, 58 in the 2nd quarter, 51 in the third quarter, and 59 in the 4th quarter. The deaths from phthisis, and indeed all chest affections, were more numerous in the 1st quarter.

In the districts, the deaths and death-rates were as follows—

Deaths from the Districts.

Districts.	1883.		1882.	
	Deaths.	Death-rate.	Deaths.	Death-rate.
Sunderland East	16	1·65	12	1·26
Sunderland West	15	2·34	11	1·79
Bishopwearmouth North ..	99	2·64	108	3·00
Bishopwearmouth South ..	62	1·52	62	1·55
Monkwearmouth	44	1·61	54	2·02
Whole Borough	236	1·95	247	2·07

This table also shows that in proportion to population there has been a decrease in every part of the Borough, except Sunderland Parish, where there is a slight increase. It is in this district that the working classes are the poorest, the worst housed, and live amidst the most insanitary surroundings. The population is very dense here also, much more than in any other part of the Borough.

The Moor.

It has been rumoured that the North-Eastern Railway Authorities are seeking to obtain a portion or the whole of the moor. It is to be hoped that they will not be permitted to secure it, for without the moor—which is the great resort of the children of Sunderland Parish—that district would suffer from a much higher mortality rate than at present, heavy though that rate may be. The moor stands much in the same relationship to the district that the lungs do to the blood circulating in the

REPORT, 1883.

The Moor (continued).

human body—it supplies it with pure air, giving tolerably free scope to the wind to sweep down and purify the stagnant atmosphere in such streets as Silver-street, Vine-street, Maling's-rigg, Neasham-square, Hartley-street, and through them to enter right into High-street East.

This open place is also the great play ground of the children belonging to Sunderland Parish, and it enables them to run from the close lanes and streets, such as Spring-garden, Covent Garden-street, Golden-alley, Maling's-rigg, Maud's-lane, and other streets in the neighbourhood.

If the moor is ever to be changed, it should be changed not into railway sidings, nor costly parks, but into a proper play ground for children, in which they will not be afraid of trespassing on the grass, but where they can exercise their limbs in the manner in which the Almighty intended that they should, and in which the Corporation will erect swings and other means of recreation as in other towns. Ornamental parks are most desirable acquisitions to large towns, affording untold pleasure to the adult population, but are of no service to the neglected children of the slums, who do not patronize them, but who, nevertheless, require the health-giving powers of pure air.

The death-rate among children under five years old in Sunderland East is 11·4, in Sunderland West 12·9, whereas in Bishopwearmouth North it is only 8·6, and in Bishopwearmouth South 7·7 per 1,000 of the district populations, and for the whole Borough 9·3. With a restricted moor, the death-rates in the first two districts would increase greatly.

Phthisis, occupations of persons dying from.

The following were the occupations in which three or more male persons above 20 years died from phthisis.

Blacksmiths	3	Labourers	34
Bottlemakers	4	Master Mariners	6
Clerks	27	Seamen	18
Fitters	4	Shipwrights	7

DEVELOPMENTAL DISEASES.

Developmental Diseases. Premature Births.

There were 88 premature births, compared with 68 in the previous year. The increase occurred mainly in Bishopwearmouth North where there were 33 deaths, as against 18 in the last return. There was an increase of 2 in Sunderland Parish, and of 9 in Monkwearmouth.

Still-born Births

The mortality returns give us no information about the still-born births. This not only applies to this town, but to all the united kingdom. The reason assigned is that it is difficult to discern between them and abortions or mis-carriages. This is unfortunate, for as the late Dr. Farr says, "the facilities of burying still-born children unregistered throws open the gate of temptation to crime."

The number of still-born children buried in the Borough was as follows—

Sunderland Cemetery	171
Bishopwearmouth Cemetery.....	63
Monkwearmouth Cemetery	61
	295

A very few of these belonged to Southwick and other districts. It is satisfactory to know that every possible care is taken by the cemetery officials to gain information before the bodies are buried.

Old Age.

One hundred and twenty-eight persons died of old age. This was an increase of 21 on the return of 1882. There was an increase over all the districts, except Monkwearmouth, in which there was a slight decrease.

The greatest mortality occurred between 75 and 85, in which period there were 62 deaths, compared with 54 of the previous year. Twenty-one deaths occurred between 85 and 95, compared with 9 in 1882.

LOCAL DISEASES.

Local Diseases.

There were 1,433 deaths, producing a death-rate of 11·8 per 1,000 inhabitants under the comprehensive classification of local diseases. In 1882 there were 1,392 deaths, which were equal to a death-rate of 11·6.

Local Diseases (continued.)

In the first quarter of the year these deaths were most prevalent. At this time the death-rate for the whole Borough was high, and even alarming, and diseases of the respiratory system caused a very large mortality, especially under the heading of bronchitis and pneumonia.

The deaths in the quarters were as follows—

1st Quarter	468
2nd do.	341
3rd do.	311
4th do.	313
Total	1,433

A summary of the diseases, arranged in quarters, has been given on page 14, and the complete particulars will be found in the Appendix, in Table IIIA.

The comparison with the previous year is given in the following table.

Diseases of	1883.		1882.	
	Deaths.	Death-rate.	Deaths.	Death-rate.
Nervous System	408	3·36	444	3·72
Special Sense	....	....	2	0·02
Circulatory System	216	1·70	161	1·35
Respiratory System	528	4·55	534	4·48
Digestive System	179	1·47	156	1·31
Lymphatic System	....	....	....	....
Glandlike Organs of Uncertain Use	2	0·01	1	0·01
Urinary System	43	0·35	52	0·45
Reproductive System	27	0·22	26	0·21
Bones and Joints	17	0·14	11	0·09
Integumentary System	13	0·17	5	0·04
Total	1,433	11·8	1,392	11·6

Diseases of Nervous System. Inflammation of Brain.

Inflammation of the brain carried off 87 persons, 63 of whom were children under five years old. Many of the deaths

ascribed to this cause should, no doubt, have been properly attributed to tubercular meningitis.

Convulsions.

Convulsions, as usual, was the most fatal disease of the nervous system, for out of a total of 408 deaths of this class it was fatal in 121 instances. Here, again, the deaths, with one exception, were those of children.

Paralysis.

Paralysis was credited with 55 deaths. These show a decrease of 6 on the previous year. It was most fatal in Bishopwearmouth South, where 24 persons died; the greatest mortality occurred between 55 and 75 years of age, at which period of life 32 persons died.

Diseases of the Circulatory System.

There was an increase of 55 deaths under the head of diseases of the circulatory system. The total of these deaths was 216, producing a death-rate of 1·70 per 1,000 of the population. The principal factors were diseases of the heart and its membranes. To valvular diseases of the heart 15 deaths were ascribed; to pericarditis, 14; and to other diseases of the heart, 174.

It is very seldom that deaths, due to heart affections, are properly described in the certicates of death. It will be noticed that the number certified under valvular diseases of that organ was only 15. It is a pity that the certificates are not more carefully filled up, so that it may be possible to learn the proportion of the various valvular diseases to each other. Fatty degeneration of the heart is very seldom certified. Practitioners generally content themselves with the vague term "heart disease," as if there was only one disease of that organ.

Diseases of the circulatory system were most fatal in the first and third quarters.

In Sunderland East there were 19 deaths; in Sunderland West, 10; in Bishopwearmouth North, 74; in Bishopwearmouth South, 67; and in Monkwearmouth, 52.

The mortality from heart disease was greatest between 65 and 85 years of age, and the following trades suffered most—

Boilermakers	4	Labourers	16
Butchers	3	Miners	3
Cartmen	3	Seamen	7
Fitters	4	Shipwrights	6

Diseases of the Respiratory System.

Diseases of the respiratory system caused 528 deaths. These were most numeorus in the first quarter of the year, and least in the third. The deaths in the first period were twice as many as in any one of the other three quarters. In the first quarter the Borough death-rate was very high, and one of the chief causes of the mortality was deaths from non-constitutional lung affections. Measles was prevalent at the time among children, and bronchitis and pneumonia seemed to walk hand-in-hand with it. Wherever measles prevailed these ailments also were present, and it is remarkable that the pneumonia seemed to be infectious. There can be little doubt that many of the deaths from bronchitis among children were really caused by pneumonia, but, owing to the difficulties of recognizing it in infants, they were not ascribed to it. Since then it has also been noticed in Newcastle-upon-Tyne that there diseases ran concurrently with Measles, and were no mean factor in producing the recent high death-rates in that Borough.

Concurrence of Measles, Bronchitis, and Pneumonia.

In the quarters the deaths from bronchitis and pneumonia were as follows—

	Bronchitis.		Pneumonia.
1st Quarter	124	....	62
2nd do.	63	....	37
3rd do.	42	....	24
4th do.	56	....	33
	285		156

In the districts the deaths were as follows—

District.	Bronchitis.		Pneumonia.
Sunderland East.....	40	....	13
Sunderland West	32	....	9
Bishopwearmouth North ..	80	....	43
Bishopwearmouth South ..	80	....	47
Monkwearmouth	43	....	44
	275	....	156

Relatively to population the deaths from these diseases were far greater in Sunderland East and West than in the other districts, for whereas the rates per 1,000 inhabitants from these

two causes were 5·4 and 6·5 respectively, they were 3·5 in Bishopwearmouth North, 3·1 in Bishopwearmouth South, and 3·2 in Monkwearmouth.

Bronchitis and Pneumonia (continued.)

Among the adult male population these diseases were most fatal to—

Fatality among trades.

Blacksmiths	7	Seamen	18
Butchers	3	Shipwrights	7
Glassmakers	3	Trimmers	4
Master Mariners	6		

These figures tell their tale as plainly as any words can do.

INFANTILE MORTALITY.

Infantile Mortality.

There were 697 deaths among infants under 12 months old; and the relative mortality compared to births was 136 per 1,000. This rate is considerably below the average rate in the 28 large towns, in which it was 156 per 1,000 children born. Indeed, in no town, except Bristol—where the rate was 133 per 1,000—was it so low.

A test of a town's sanitary condition.

When it is recollected that two of the greatest tests of a town's sanitary condition are the deaths from zymotic diseases, and the mortality among children, the Health Committee may fairly congratulate themselves that they have obtained substantial benefits for their increased expenditure.

Last year, and in the previous ten years, the deaths and the relative rate to children born were as follows—

Year.	Deaths.	Deaths per 1,000 Children born.
1883	**697**	**136**
1873	744	196
1874	707	160
1875	763	173
1876	662	150
1877	637	141
1878	851	183
1879	599	133
1880	736	166
1881	672	146
1882	904	184

Infantile Mortality (continued.)

Compared with previous years, the figures are most satisfactory, for, with one exception—the year 1879—no year has been so healthy for infants.

If the deaths be viewed in proportion to population, the result is equally satisfactory, for it is the lowest mortality rate hitherto reached, with the exception of 1879. In 1879, the lowest rate of the last ten years was attained. It was then 5·3 per 1,000. In the other nine years it varied, reaching its highest rate in 1878, when it was 7·6. Last year it was as low as 5·7 per 1,000 inhabitants. Again, if it be borne in mind that when there is a very high birth-rate there is not, unfrequently, a correspondingly high death-rate among infants, the mortality must be considered most satisfactory, for Sunderland last year had the highest birth-rate of the 28 large towns.

In the tables in the Appendix, numbered III, IIIA, and IIIB, the registered causes of the mortality are fully set out.

The causes of these deaths are similar to those which have been pointed out in the Reports of the past and present Medical Officer of Health, and it is almost a superfluous task to re-iterate year after year facts that are so well known to the Sanitary Authority.

Autumnal Diarrhœa.

A very gratifying feature in the mortality returns is the decrease in the number of deaths from autumnal diarrhœa. Now, these are caused by improper feeding, meteorological influences, which are not clearly understood, and, to a very large extent, by insanitary conditions. The deaths from diarrhœa in July, August, and September, numbered only 48, which, with the exception of 1879, a remarkable year in the annals of infantile mortality in the Borough, was the lowest recorded number. This is another evidence of the good results which followed the improved system of emptying, and more frequent cleansing of, the ashpits. The systematic flushing of the dirtiest lanes with water also had a most beneficial effect.

The deaths under five years from diarrhœa in each district for the third quarter are given in the following table—

Sunderland East	2
Sunderland West	2
Bishopwearmouth North	17
Bishopwearmouth South	12
Monkwearmouth	16
	49

The small mortality in Sunderland East and West is particularly gratifying, for it was in these districts special efforts were made to keep the lanes clean by flushing with water. In these lanes the people's habits correspond in large measure with their surroundings. Neglectful of cleanliness, both of person and home, they live in many instances in a state of squalor. It was, therefore, on this account that the Medical Officer of Health recommended the flushing of the lanes, so that, as far as possible, the injurious effects of decomposing filth, which they had thrown on the ground, might be removed.

Meteorological observations.

The following table exhibits the temperature and rainfall, together with the number of infantile diarrhœal deaths registered during the autumnal months of each year since 1875.

Years.	Mean Temperature of Air.	Daily Range of Temperature	Rainfall in Inches.	Deaths under 5 years of age.	Total Deaths.
	°F.	°F.			
1883	**59·00**	**16·5**	**11·06**	**48**	**54**
1875	61·06	17·5	10·24	70	88
1876	60·05	26·2	7·78	86	109
1877	58·40	12·5	9·76	49	62
1878	62·00	14·4	6·43	140	156
1879	58·00	14·2	8·20	28	32
1880	61·50	13·7	9·28	146	154
1881	58·00	16·0	12·32	77	90
1882	59·60	20·4	9·06	97	106

Meteorological observations (continued.)

The connection between the mortality from diarrhœa and the meteorological conditions is shown in the following table—

Week ending	No. of Deaths.	Aged 3 months and under.	Aged 3 months to 6 months.	Aged 6 months to 12 months.	Aged 1 to 5 years.	5 years and upwards.	Maximum Temperature of the Air.	Mean Temperature of the Air.	Daily Range of Temperature.	Rainfall in Inches.
							°F.	°F.	°F.	
July 7.....	2	1	..	..	1	..	72·0	60·7	14·7	0·87
„ 14.....	3	1	1	..	1	..	78·0	65·4	20·5	0·43
„ 21.....	2	..	1	..	1	..	71·0	57·0	17·2	2·14
„ 28.....	6	2	..	2	2	..	69·0	56·7	14·8	0·52
Aug. 4.....	2	..	..	1	1	..	72·0	60·2	18·1	0·30
„ 11.....	5	1	1	2	1	..	73·0	60·2	19·1	0·52
„ 18.....	6	..	1	1	4	..	77·0	60·9	20·7	1·79
„ 25.....	3	..	1	..	1	1	81·0	64·4	22·5	0·00
Sept. 1.....	3	1	..	1	1	..	82·0	60·7	16·8	1·00
„ 8.....	9	..	2	1	3	3	68·0	54·7	14·0	0·70
„ 15.....	4	1	2	1	1	..	68·0	54·5	10·5	0·85
„ 22.....	6	0	..	..	2	2	68·0	55·5	9·4	1·31
„ 29.....	3	1	..	1	1	..	69·0	56·8	17·4	0·63
Total deaths and meteorological averages.	54	9	9	10	20	6	72·9	59·0	16·5	11·06

ACTION TAKEN DURING THE YEAR FOR THE PREVENTION OF THE SPREAD OF DISEASE.

REPORT, 1883.

Patients removed to Hospital.

The number of persons suffering from infectious diseases, who were removed to the House of Recovery and the Union Hospital, are given in the following table, which also shows the numbers removed in the three previous years.

	1880.	1881.	1882.	1883.
Smallpox	1	2	4	216
Measles	6	2	7	0
Scarlet Fever	40	31	9	6
Diphtheria	0	0	1	0
Typhus Fever	19	6	92	49
Enteric and Continued Fever		14	30	22
Erysipelas	1	2	1	0
	67	57	144	293

Of these 293 cases, 113 were removed to the House of Recovery, and 180 to the Union Hospital.

The total number of cases of infectious disease reported to the Medical Officer of Health, or found out by the Health Office officials, was 805, compared with 1,744 in the previous year. It is to be noticed that a far greater number of cases were removed to hospital than in previous years. This was owing to the fact that very great pressure was put on persons, suffering from small-pox, to avail themselves of hospital protection and isolation.

Infectious Diseases, of which information was obtained.

The following table gives the diseases of which the Authority gained information during the year, together with the number of cases in the three previous years.

	1880. No. of Cases.	1881. No. of Cases.	1882. No. of Cases.	1883. No. of Cases.
Smallpox	1	4	7	379
Typhus Fever	21	11	126	53
Enteric ,,	35	53	79	71
Simple Continued Fever	16	5	25	10
Scarlet Fever	792	459	435	121
Measles	279	8	580	34
Diarrhœa	198	85	268	97
Whooping Cough	138	68	197	22
Diphtheria	6	11	27	18
	1486	704	1744	805

Information obtained (continued.)

In the early part of the year, precautions were mainly directed against the spread of typhus fever, scarlet fever, and measles, which were at the time more prevalent than any other infectious diseases. Information respecting these continued to be afforded to the Medical Officer of Health by the great bulk of the profession.

Circular Letter to Medical Profession.

In the third quarter of the year, however, smallpox having made its appearance, the Medical Officer of Health forwarded the following letter to each member of the medical profession—

Health Offices, Sunderland,
August 13th, 1883.

Dear Sir,—I regret to inform you that during the last eight days seventeen cases of smallpox have come under my observation. Fearing that the disease may assume an epidemic character, I am anxious to receive early information of all cases that may arise. I therefore appeal to the individual members of the medical profession to continue to afford me their generous support, and to supply me with that important information, which they have been ever ready to grant, when serious disease threatened the town. I will be pleased to receive from you information of all cases that may come under your notice.

I am, dear Sir,
Yours faithfully,
ALFRED E. HARRIS,
Medical Officer of Health.

Hearty response by the Profession.

To this circular a ready and hearty response was given by nearly every member of the profession in the Borough. There could not possibly have been greater unanimity, and during the remainder of the year nearly every case of smallpox, treated by a medical man, was reported to the Health department. For this generous and disinterested conduct the Medical Officer of Health is very grateful, for it was the undoubted means of placing in his hands power to repress the disease which otherwise he would not have possessed. He was thereby enabled to distribute in every attacked household copies of the "Rules for the prevention of infectious diseases," which were printed in the Annual Report for 1882 (pages 47 and 48), and he was also enabled, either through himself or Inspector McKay, to impress on persons the desirability of removal to hospital. In this recommendation he was generally seconded by the profession, notwithstanding the strong opinion as to the inadequacy of the hospital accommodation of the Borough.

Vaccination and Re-vaccination.

Some months (March 1st) previous to the issue of this circular, the Medical Officer reported to the Health Committee as follows—

An order of the Local Government Board advises that, on the appearance of smallpox within the district, the Local Authority should recommend vaccination and re-vaccination by means of handbills, posters, &c. I have now to ask to be allowed to issue such bills.

Poster recommending Re-vaccination.

This was readily agreed to, and the following bill was circulated in thousands—

BOROUGH OF SUNDERLAND.

RE-VACCINATION.

Smallpox having made its appearance in this town, it is much to be feared that this loathsome disease may become epidemic in the Borough, where, it will be remembered, it caused upwards of 1,000 deaths in 1871, it has therefore become necessary that every precaution should be taken which may act as a preventative against an attack of the disease.

The Health Committee desires earnestly to impress on all persons the necessity of re-vaccination, which is the great preventative of smallpox. It has been abundantly and amply proved that if it be once properly and successfully employed, it does not require repetition, and affords a protection against smallpox more certain than any known means can give. If re-vaccinated persons should take the disease, it is generally in so mild and modified a form as not to threaten death or disfigurement.

Persons desirous of being re-vaccinated, should apply at once to their respective Medical attendants; whilst those desirous of being re-vaccinated *free of charge*, will, on application to Mr. J. Thompson, Vaccination Officer, 17, John Street, Bishopwearmouth, receive the necessary authority to attend upon one of the public vaccinators.

ALFRED E. HARRIS,
March, 1883. Medical Officer of Health.

At the same meeting, the Medical Officer recommended that the Health Committee

Vaccination Committee order their Officers to vaccinate at the peoples' homes.

Request the Board of Guardians to communicate with their Medical Vaccination Officers, intructing them to attend to vaccinate and re-vaccinate persons living in houses wherein smallpox has made its appearance. The Local Government Board has made provision for this in a memorandum dated March, 1877.

This was also agreed to, and the Vaccination Committee at once instructed their Medical Officers, and also issued posters respecting vaccination.

This was an exceedingly wise course to adopt, and one that should be followed in all epidemics, because by preventing persons, coming from infected houses, mixing among the ordinary attendants at the vaccination stations, the chances of the disease being spread are considerably minimized.

Vaccination and Re-vaccination (continued.)

Every care was taken to prevent infringements on the rights of private practitioners, and with one or two exceptions, with uniform success. The Medical Officer, in forwarding the names to the Vaccination Officer, stated whether or not it was the desire of the people to be vaccinated by a private practitioner.

The Medical Officer of Health desires to bear testimony to the zeal with which the Vaccination Committee, and its efficient officer, Mr. Thompson, carried on their work, and to their anxiety to assist him in every way to stamp out the disease, and he now wishes to thank them for their invaluable services.

The Medical Officer, having obtained the consent of the Health Committee, compiled the following leaflet, of which fully 20,000 copies were issued :—

A FEW FACTS ABOUT SMALLPOX, VACCINATION AND RE-VACCINATION.

Published by authority of the Health Committee.

SMALLPOX IN THE UNVACCINATED.

Smallpox in sixteenth century.

SMALLPOX, in its uncontrolled state, is the most horrible, loathsome, and fatal of all diseases. Thus, in the sixteenth century, in Mexico, it caused the deaths of no less than three millions and a half of the population; and the epidemic is described by Prescott, the historian of that country, as "sweeping over the land like fire over the prairies, smiting down prince and peasant, and leaving its path strewn with the dead bodies of the natives who perished in heaps like cattle stricken with the murrain."

Among Indians.

Among the Indians of North America, it has, in a few months, been known to take off more than half of whole tribes; and one writer describes it as "a fire consuming the dry grass of the field. The infection spread with a rapidity which no flight could escape, and with a fatal effect which nothing could resist. It destroyed with its pestilential breath whole families and tribes."

In Europe.

In Europe, Smallpox—before Vaccination was introduced—was also terribly fatal, and its annual ravages have been estimated at half-a-million of lives. Its presence was almost constant in any one given place.

In England.

In England, the average annual deaths numbered 3,000 for every million of people, which, calculated on the population of to-day, would represent more than 75,000 deaths from Smallpox in a year.

Among the highest classes.

Neither rich nor poor were safe. William the Third's father, mother, wife, uncle, and his two cousins, children of James the Second, died of it; and he himself was so severely attacked that he escaped only with a constitution shattered for life.

Its effect on survivors.

The effects of Smallpox on survivors have been graphically described by Lord Macaulay, when writing of the 17th century, as "leaving in those, whose lives it spared, the hideous traces of its power, turning the babe into a changeling at which the mother shuddered, and making the eyes and cheeks of the betrothed maiden objects of horror to the

lover." These effects are the same now in the unvaccinated as they were then, when vaccination was unknown. But there are other not unusual results, such as loss of sight or hearing. Many are left consumptive, weakly, and frightfully scarred and disfigured.

REPORT, 1883.

Its effects on survivors (continued.)

THE POWER OF VACCINATION.

Over eighty years' trial of Vaccination has proved that the great majority of those persons who were duly and efficiently vaccinated have been saved from a future attack of Smallpox.

Eighty years' experience of.

Smallpox itself does not afford absolute protection against a second attack, and neither is it pretended that Vaccination will afford complete immunity. It is, however, justly claimed for it, that it will, in the great number of cases, ward off Smallpox altogether; and in the other cases it will so alter and control its character as to render Smallpox, which is usually confluent, unsightly, and deadly, a modified, far less loathsome, and not nearly so fatal, disease.

How far it protects.

In London, in 1881, among 55,000 children under ten years' old, who were unvaccinated, there were 782 deaths; while among 861,000 children, who had been vaccinated, there were only 125 deaths from Smallpox. If the deaths among the vaccinated and unvaccinated had been in the same proportion, there would have been only 9 among the latter (the unvaccinated), instead of 782. And if the vaccinated children had died at the same rate as the unvaccinated, there would have been not 125 deaths, but 12,000 deaths. The great saving of human life can only be ascribed to vaccination.

Recent London experience.

STATISTICAL EVIDENCE of the different degrees in which persons vaccinated in different ways will be safe against death by Smallpox, if they should happen afterwards to contract this disease.

The table is founded on information given to the Medical Officer of the Local Government Board by the late Mr. Marson, Surgeon of the Smallpox Hospital, as the result of his observations made during twenty-five years in nearly 6,000 cases of post-vaccinal smallpox.

Cases of Smallpox, classified according to the Vaccination-marks borne by each Patient respectively.	Number of Deaths per cent. in each Class respectively.
1—Stated to have been vaccinated, but having *no* cicatrix	$21\frac{3}{4}$
2—Having *one* vaccine cicatrix*	$7\frac{1}{2}$
3—Having *two* vaccine cicatrices† . . .	$4\frac{1}{8}$
4—Having *three* vaccine cicatrices . . .	$1\frac{3}{4}$
5—Having *four or more* cicatrices . . .	$\frac{3}{4}$
Unvaccinated	$35\frac{1}{2}$

*Among cases in which the one cicatrix was *well marked*, the death-rate was $4\frac{1}{4}$. Among cases in which it was *badly marked*, the death-rate was 12.

†Among cases in which the two cicatrices were *well marked*, the death-rate was $2\frac{3}{4}$. Among cases in which they were *badly marked*, it was $7\frac{1}{4}$.

Figures such as these must convince all, who are not steeped in prejudice, of the great utility of vaccination.

REPORT, 1883.

Recent London experience (continued.)

In the London Smallpox Epidemic of 1876-8, the experience of the Metropolitan Asylum Hospitals was that, while the vaccinated cases of Smallpox were three times as numerous as the unvaccinated (it being always borne in mind that the vaccinated are twenty-four times as numerous as the unvaccinated) *the absolute number of deaths among the unvaccinated was twice as great as among the vaccinated.* Out of 10,181 cases treated in these hospitals, 7,674 were vaccinated; 2,507 unvaccinated. There were 1,833 deaths, and of these 1,205 were unvaccinated, while there were only 628 among the vaccinated. Or to put it in another way, the death-rate was—

Among the Vaccinated	82	per 1000
,, Unvaccinated	481	,,

Now, to show further the good effects of Vaccination, it was found, in Homerton Smallpox Hospital, that the general death-rate among the patients was as follows:—

Vaccination of good quality ..... =	33·3	per 1000
,, of indifferent quality .... =	111	,,
Stated to have been vaccinated, but with no evidence of Vaccination .. =	272	,,
Unvaccinated ..... =	452	,,

THE POWER OF RE-VACCINATION.

In the Services.

Re-vaccination, once properly and successfully employed, does not appear ever to require repetition, and is an almost absolute protection against Smallpox.

Formerly, it was not the custom to re-vaccinate our soldiers and sailors, but now it is, and the result has been that whereas then our Armies were ravaged with Smallpox, and our war ships were often compelled to quit the seas, now the deaths from Smallpox in the Navy are absolutely nil, and in the Army considerably less than one per 1,000 soldiers.

Among Nurses and Hospital Servants.

But there is even stronger evidence than this; for the late Mr. Marson, of the London Smallpox Hospital, certifies that the servants and nurses, on entering that institution, were at once re-vaccinated, (unless they have had Smallpox previously), and that the protection afforded by the operation is so great, that they who must of necessity be constantly in the closest proximity to the disease, *never took it.* This was the experience of forty-one years.

From 1876-9, in London, out of nearly twelve thousand patients admitted into the Smallpox Hospitals, *no case of Smallpox was known of any person who had been efficiently vaccinated, and successfully re-vaccinated!*

These facts are earnestly impressed on the public, who are strongly urged to have the vaccine marks on themselves and their children carefully examined by their Medical attendant, so that if necessary they may be immediately re-vaccinated.

Let it be recollected that Smallpox is now at our very doors, and that its blighting and fatal effects will only be felt by those who do not take precautions against it. These precautions are—(1) Immediate vaccination of all children or adults who have never been vaccinated; and (2) re-vaccination of all persons over fifteen years' old, or of those on whose arms there are only imperfect scars.

Above all, those persons, in whose houses Smallpox has appeared, are earnestly appealed to not to delay. In their case to put off is but to court disease. If they would stamp out the malady, vaccination or re-vaccination is the only remedy.

On the 30th August, in his usual fortnightly report, the Medical Officer of Health, knowing that in Sunderland there is a strong prejudice against the compulsory removal of patients to hospital, and that the powers conferred by the Public Health Act had been only once previously enforced in the Borough, thought well to draw the attention of the Health Committee to them as follows :—

Compulsory removal to Hospital.

I desire to point out, in reference to those persons who decline to enter hospital,* that the Public Health Act, 1875, section 124, gives the Authority power to have them removed, on a Magistrate's order, to a Fever Hospital. I have not attempted to put the clause into force, not wishing to avail myself of the power until I had heard from this Committee their will in the matter.

The Committee, however, made no order, and did not express any opinion on the matter, and the clause was, therefore, only enforced on one occasion. The Medical Officer of Health felt that, when he had no available beds in the House of Recovery, he would not be completely justified in forcibly removing persons to the Union Hospital, for thereby he would have made paupers of people against their wishes. It cannot be too clearly understood that any persons treated in the Union Hospitals, whether paid for or not by the Local Authority, become *ipso facto* paupers. In any case it is doubtful, if the point were raised, if a Union Hospital could be considered, in the meaning of the Act, a "suitable" hospital.

Although the compulsory power was not enforced, yet very strong, persuasive pressure was put on patients to avail themselves of the hospital shelter, and considering the feeling—a most unjustifiable feeling (for it was based on most exaggerated statements that appeared in the local press)—with very great success, for no less than 105 out of 379 known cases, of which an additional 109 cases entered the House of Recovery, consented to removal to the Union Hospital.

Warnings given to persons in whose houses there were no means of isolation.

The spread of smallpox, up to October, was kept very much in check by the following means :—When a case occurred, for which, in the opinion of the Medical Officer of Health, there were no means for its proper isolation at home, the members of the family, not engaged in nursing, were told that it was essential

* *i.e.*, when they have not proper lodging and accommodation.

Warnings given to persons (continued.)

for the public safety that they should elect to remain altogether *in* or *out* of the house, and that they could not be allowed to mingle indiscriminately with the public, while so virulent a disease as smallpox remained unisolated in their homes. It was explained to them that the members of the family when going to and from their work would, almost to a certainty, convey the infection to others or to their fellow workers, and they were also informed that they would be liable to a penalty of £5 for an offence of this character, for they thereby exposed clothing which had itself been transmitted after exposure to infection, and which had not been disinfected.

In October the Medical Officer of Health, deeming that certain three persons had not proper means of isolation, informed the parents as above, and the patients were then removed to hospital at the request of the parents, who were given ample time to consider their course of action.

Letter from medical man complaining of Medical Officer of Health's action.

The same Medical man attended all the cases, and had reported them to the Health Officials. When the patients had been removed, he wrote a strong letter to the Health Committee, complaining of the course of action pursued by the Medical Officer of Health, in which he said that—

> This system of isolation (that is preventing persons going to their work with infection in their rooms) no doubt may be an effectual means of stamping out disease, but to my mind it might be equally the means of stamping out existence as well, unless a proper supply of provisions had been stored up.

A commentary thereon by the Medical Officer of Health.

As a commentary on these objections, the following report of the Medical Officer of Health was read at the same meeting of the Health Committee, at which the above letter was considered. Speaking of the general death-rate, he said—

> Although these figures are satisfactory, yet they include 3 deaths from smallpox, not including a death from the same disease that occurred at St. Thomas' Vicarage—the Vicar's mother. This lady's case was peculiar, as she never went out except (occasionally) to Church, and then she passed directly from her house to it. The only inference is, that she caught the infection there. That this is not improbable, is borne out by the fact that on Sunday morning last a new case of smallpox at Cross Green Street, was reported to me. On enquiring the father's whereabouts, I was informed he was *at Church*. These people had two rooms, a living room and a sleeping room, and the patient was running about from room to room. Now, here is a great danger to the public! A man, with no possible means of keeping his clothing free from the infection of smallpox, moves about at will.

I think if any measures can be taken against such careless persons they ought to be taken in future, and also against persons who wilfully expose themselves to infection by visiting friends when ill, because through their foolhardiness they not only endanger their own lives, but, most unfortunately, the lives of other people. I am tired of warning people so caught, and I, therefore, trust this Committee will allow prosecutions against them.

In reply to the letter, I would point out that the Inspectors and I have only done our duty towards this Corporation and the town under the powers given by the Public Health Act, 1875. I believe the cautions given to these people were fully justified by Section 126 * of the Public Health Act, which seems to me very explicit.

I may mention that in the case of S—— C——, the father is a tailor working at home. In the case of E—— W——, the father is clerk to St. —— Church (and the curate sent for me to know what I would advise to be done). In the case of A—— G——, the father is a slater, living in a cottage in which there are five other persons living.

I am sorry that even an appearance of a difference of opinion should have occurred between the Health Department and any medical man in the Borough. It has not been my fault, because in a circular forwarded to every doctor in the town early last year, I told each one that if he said no interference was required, neither the Inspector nor I would interfere.§

This matter unfortunately led to a discussion, in which the Medical Officer of Health was told by some members of the Committee that he exceeded his duty, and that he was guilty of officialism. The Medical Officer felt these charges hard to bear, because he was conscious, whether he had acted rightly or wrongly—and he believes he did the former,—that he had at heart the best interests of the people, and that he was using the only available means at his disposal to suppress the disease.

The legality of the Medical Officer of Health's action questioned.

Some members questioned the legality of the Health Officer's proceedings; and the Town Clerk, on being appealed to, considered that the word "clothing," in the meaning of the 126th section of the Public Health Act, did not include the clothing *worn* by the persons living in the same room or premises.

Medical Officer of Health requested to discontinue his line of action.

The Town Clerk, no doubt, interpreted the law correctly, and consequently the Committee had no alternative but to request the Medical Officer of Health to cease acting as he had done in the past, and thus he was deprived of his most potent weapon for the prevention of the spread of the disease, which immediately made rapid strides.

* It says—"Any person who gives lends sells transmits or exposes without previous "disinfection any bedding *clothing* rags or other things *which have been exposed to* "*infection from any such disorder* shall be liable to a penalty not exceeding five "pounds."

§ *Vide* page 45 Medical Officer's Report, 1882.

Anomalous state of the law on the question of infected clothing.

This is a question of very great importance to the community, and shows a very anomalous state of the law.

There can be no doubt that if any person carried into company, without previous disinfection, articles of wearing apparel which had been lying about, or hanging in, the infected room, that person would be subject to a heavy penalty; but, according to the above interpretation of the word "clothing," if the same person had lived in the midst of infection, and had afterwards mixed with the public, although dressed in the very clothing which he had worn in the sick room, then this person would not be liable to punishment. In other words, clothing ceases to be clothing when it is worn. The sooner this clause of the Public Health Act is amended the better, for it is monstrous to think that nurses and other persons who may be employed, or who live in infected houses where there are no means of isolation, should be allowed to wander about according to their own will without changing their wearing apparel, and to escape punishment for spreading disease.

It is pleaded that if this section were interpreted according to the Medical Officer's reading of it, that then medical men would be subject to it. It must be remembered, however, that "the letter killeth," but clearly the "spirit" of the clause is to prevent infection, and not to hinder the patient receiving the benefit of medical skill. No Act of Parliament would for a moment dream of excluding from the sick room the Physician, whose business of life is to heal the sick, or to keep him locked up there. The case is, however, very different with respect to nurses, whose duties confine them to the sick room, and with relatives, friends, and other persons who have no business there. In the case of medical men, it must be recollected that they are only momentarily in the sick room, and it must be affirmed that no class of persons are more careful not to convey infection than they. If they were not, much fatal results would accrue to innocent persons, and the doctors' means of livelihood would soon be stopped.

Owing to the continued increase of the smallpox epidemic the Medical Officer of Health forwarded the following circular to the members of the medical profession in Sunderland—

Meeting of the Medical Profession.

Health Offices,
Sunderland, 12th December, 1883.

Dear Sir,—I will be pleased to meet you, together with the other members of the medical profession, on Friday next, 14th inst., at a quarter-past three o'clock, at the Subscription Library Lecture Hall, Fawcett Street, to discuss with me some means to be adopted to check the present epidemic of smallpox.

I am, dear Sir,
Yours faithfully,
ALFRED E. HARRIS,
Medical Officer of Health.

In response to this invitation, a large number of the medical profession assembled.

Suggestions by the Medical Officer of Health

At the meeting, the Medical Officer suggested that they would greatly assist the Health Department in (1) recommending the use of disinfectants; (2) in reporting all cases, except when they were thoroughly satisfied that all their recommendations would be carried out; (3) in impressing the necessity of adopting precautions generally; but (4), above all, in strongly recommending vaccination and re-vaccination as being *the only means* whereby the recurrence of the disease in the same house can be prevented.

A long discussion ensued, in which only one feeling animated the profession, namely, to assist the Health Committee and the Medical Officer.

The following resolutions were passed—

Resolutions by the Profession.

That this meeting of the medical profession desires to express its willingness to support and aid the Medical Officer of Health in his efforts to suppress the present outbreak of smallpox.

That, with regard to the use of the disinfectants, the practising of vaccination and re-vaccination, they are heartily in accord with Dr. Harris' suggestion; but that it appears to this meeting that however willing the members of the profession may be to afford early information of the existence of the disease, until proper hospital accommodation be provided, which will win the confidence of the public, such information will be valueless.*

That it be a suggestion from this meeting that the clothing and furniture from infected persons and houses be more scrupulously destroyed.

That the Health Committee be recommended to obtain a Lyon's Disinfecting Chamber.

* This latter part of this resolution was drawn in too stray terms. The idea meant to be conveyed was, that it was *comparatively* valueless without efficient hospital accommodation.

In reference to the third paragraph, it may be stated that the medical men laboured under a misapprehension, for every care was taken throughout the year.

Co-operation by the School Board.

As the epidemic of smallpox advanced, it was feared that children attending the Board Schools, from infected houses, might be the means of conveying the disease to others, and it was, therefore, decided to send the addresses of all cases to the Board Authorities so that the school attendance of children coming therefrom might be stopped. This information was much appreciated by the School Board, and without doubt has been followed with very good results. The School Board, on their part, heartily reciprocated the action of the Health Committee, and in return ordered their Inspectors to report all cases of infectious diseases, coming to their knowledge, to the Medical Officer of Health. This was done with great advantage to the Borough, and proved almost the complement to the information supplied by the medical profession. The Sanitary Authority have every reason to be grateful for the information supplied, and are grateful.

At the first visit of the Medical Officer of Health, or Inspector, to an infected house, a printed paper was left with the head of the household, with a request that, on the termination of the illness, he should get it filled up by the medical attendant.

The form, which is similar to that used by the Medical Officer of Health at Newcastle-on-Tyne, is as follows--

To the Medical Officer of Health,
Health Office, Sunderland.

Dear Sir,—I hereby certify that the premises, bedding, &c., of at No. are now ready for final disinfection after

(Signature of the medical attendant)

Dated this day of 188

Disinfection of Houses, Clothing, &c.

On its receipt by the Medical Officer, the Disinfector attended, fumigated the rooms, and removed such articles of clothing as required disinfecting to the Hot Air Chamber.

In Tables XII. and XVIII. in the Appendix will be found a statement of the articles fumigated or destroyed. The figures to be found therein exhibit a large increase on the previous year's work. Thus, in 1882, there were 680 articles disinfected at the

Disinfecting Chamber, whereas last year there were 1,642, and there were also 250 articles destroyed, compared with 148 in the previous year.

Precautions against Cholera.

Owing to a memorandum received by the Medical Officer of Health from the Local Government Board in reference to cholera, the former reported to the Health Committee (Aug. 2nd) that arrangements had been made for all vessels, when boarded at sea by the pilots, to signal if illness was then, or had been, on board during the voyage. In this way immediate examination of ships on arrival was attained, because the Customs Authorities at once communicated with the Medical Officer for the Port.

It was also arranged that the tier in the river, opposite the Harbour Commissioners' offices, should be set apart for the use of ships which were detained in quarantine.

By order of the Health Committee, handbills and posters were extensively circulated throughout the Borough advising precautions on the lines laid down in the memorandum issued by the Local Government Board.

Overcrowding.

Special attention was given to overcrowding, but the Inspectors found it necessary in only nineteen instances to serve formal notices. It was generally found that the persons quietly acquiesced to the orders given them, and at once removed their families to more suitable rooms.

Washing infected clothes at the Public Washhouse.

On September 13th, the Medical Officer reported—in consequence of a woman having been caught washing infected clothing in the public wash-house, Monkwearmouth—that notices should be placed in each of the wash-houses warning persons against such an evil practice, and this was done. Bills were also extensively posted throughout the Borough.

HOSPITAL ACCOMMODATION.

REPORT, 1883.

Impossibility to isolate more than one infectious disease in House of Recovery.

On the advent of smallpox in the Borough, the Medical Officer of Health called the attention of the Health Committee to the impossibility of isolating that disease in the House of Recovery while other infectious diseases were also in it, and on March 15th, in his report to the Committee, he asked for their instructions as to the steps he should take if fever cases, requiring hospital treatment, came under his notice. It was decided that the Board of Guardians should be invited to permit the removal of patients to their Fever Hospital, and also to admit smallpox patients into their Smallpox Hospital in the event of the House of Recovery being full.

Arrangement with the Board of Guardians.

An arrangement was accordingly made whereby patients should be received by the Guardians on a payment of ten shillings a week being assured. Taking all the circumstances of the case into consideration, this was the best temporary arrangement that could possibly be made. At all events, it was the most speedy and least expensive to the Borough.

Union Smallpox Hospital.

The Union Smallpox Hospital is a wooden building, and is also known as the "black house," from being painted black (a great mistake). It was built during the previous smallpox epidemic, when it did good service. It still remained intact, and the Board of Guardians being willing to place it at the disposal of the Corporation, the latter were only too glad to have it for their pressing wants. It had been certified by the Local Government Board to accommodate 64 patients, but, as a matter of fact, it never held at any one time during the present epidemic more than 42 patients, so that all statements to the effect of its having been overcrowded are entirely erroneous.

It is much to be regretted that during the greater part of the year a continual warfare was kept up against the temporary use of the Workhouse Hospitals for infectious diseases, and these institutions were abused in no unmeasured terms. This was a continual source of regret to the Medical Officer of Health, who

found again and again that persons declined to enter them owing to the bad name they had received. However, as time advanced, this repugnance more or less declined, and it became easier to induce persons suffering from infectious disease—especially smallpox—to avail of them for purposes of isolation. There was always ample accommodation in the Union Smallpox Hospital.

During the year, the following patients were treated in the Union Fever Hospitals on behalf of the Urban Authority—

Smallpox	105
Typhus Fever	41
Enteric Fever	18
Scarlet Fever	5
	169

There were 55 deaths—20 from smallpox, 2 from scarlet fever, 30 from typhus, 2 from enteric fever, and 1 from continued fever.

The House of Recovery afforded shelter to 113 patients during the year, viz.—

Enteric Fever	2
Scarlet Fever	1
Typhus Fever	1
Smallpox	109
	113

Little or no difficulty occurred in inducing patients to enter this hospital, because, despite all the disadvantages it possesses as a building for isolating more than one disease, yet it was conceded that it might fairly treat one disease within its walls.

It is satisfactory for the Medical Officer to be able to say that the medical men attending at, and the patients treated in, the institutions, have invariably expressed themselves as highly satisfied with the treatment and management of the patients.

Eighty-six of the smallpox patients treated in the hospital were vaccinated, and 27 unvaccinated. Of the former, 6 died, and of the latter, 8 died.

Vaccinated patients	86	6 deaths, or 6·9 per cent.
Unvaccinated patients	27	8 deaths, or 29·6 per cent.

SANITARY REPORT.

SANITARY REPORT, 1883.

Nuisances reported.

During the year, the Inspector reported 2,316 nuisances. Of these, 250 were abated without the service of a formal notice. Of the remaining 2,065 nuisances, 2,001 were abated before, and 65 after, proceedings had been taken. The magistrates, in three instances, made orders to abate nuisances (*vide* Table XVIII. in Appendix.)

Notices served.

The actual number of notices served by the Inspectors was 4,523. The offences for which they were issued will be found in Table XVI.

SANITARY INSPECTORS.*

Increase of the staff of Inspectors.

For a long while past the Inspector of Nuisance (Mr. McKay) and the Assistant Inspector (Mr. Jobling) were unable to cope with the increasing work of the Borough. The Health Committee, therefore, wisely determined to double the staff, and, accordingly, two Assistant Inspectors—Messrs. Beel and Wheat—were appointed in August.

The Medical Officer then divided the Borough into districts, and appointed an Inspector to each.

Sunderland Parish—Inspector McKay, with power, as the only Inspector of Nuisances recognised by the Local Board, to inspect all parts of the Borough.

Bishopwearmouth South—Assistant-Inspector Jobling.

Bishopwearmouth North—Assistant-Inspector Beel.

Monkwearmouth—Assistant-Inspector Wheat.

COMMON LODGING-HOUSES.

During the year, 273 visits were made to the Common Lodging-houses. As a rule, they were found by the Inspectors in a clean and orderly condition. In a few instances there was overcrowding, and ten of the keepers were, at various times, brought before the magistrates and fined.

The great defect in these houses is the imperfect ventilation of the rooms. Bye-law 9 requires that—

"Every keeper of a Common Lodging-house shall cause every room in such lodging-house to be properly ventilated."

* *Vide* page 66 of Annual Report for 1882.

This bye-law has been systematically disregarded, and, indeed, it was never enforced by the officials,* the result, of course, being that at night time the air in the rooms was most offensive.

COW HOUSES.

Milk supply from town cow byres.

These were inspected at various times during the year, and were generally found in a fairly clean condition. They are situated in all parts of the Borough. The system of allowing these byres within the town limits is of very doubtful advantage. The milk cannot be as good as that coming from the country, for the simple reason that cows kept in close confinement cannot possibly be so healthy as those brought up in the country. The Health Committee during the year clearly recognised this, for in every instance in which application for the registration of a new one was made, by insisting on good ventilation, ample air space, a good water supply, proper accommodation for cleansing the milk vessels, a suitable place for storing fodder, and a midden removed as far as possible from the byre—they hoped to secure for the public the best milk possible, and also to guard against the dangers of a contaminated milk supply.

The only argument which the Medical Officer has ever heard urged as a reason why they should be retained, was that they would then be under his supervision. Surely this is a very poor one, because, if outside the Borough, they would be equally under the supervision of another Medical Officer of Health, and the owners would be equally liable to punishment if they offended against the law.

SLAUGHTER HOUSES.

Inspection of slaughter houses.

The slaughter houses of the Borough were systematically visited by Inspector Jobling during the year. They were kept in as wholesome a condition as it is possible to keep slaughter houses, which are also shops, and unprovided with efficient means for cleansing.

On page 62 of the Annual Report for 1882, the Medical Officer tabulated his reasons for desiring a public abattoir.

* Since the beginning of the present year, many of them have been ventilated on Bird's plan.

Inspection of slaughter houses (continued).

In a special report on the recently increased death-rate of the city, Dr. Armstrong, the Medical Officer of Newcastle, thus sums his reasons for advocating an abattoir.

Sanitary advantages—

1.—Removal of nuisance from dwellings.

2.—Exclusion of putrefiable matter from sewers.

3.—Protection of meat from liability to exposure to foul emanations.

4.—Limits to traffic in diseased meat.

The economic advantages are—

1.—The meat is less liable to spoil.

2.—The blood and offal are saved.

3.—Saving to the public from order, proper division of labour, avoidance of transportation, and the doing of business on a large scale.

4.—Abattoirs yield a fair profit. That at Bradford is said to pay 6 per cent., and that at Birkenhead 5 per cent.

The Medical Officer of Health would impress on the Sanitary Authority of the Borough the great necessity which exists for a public slaughter house in Sunderland.

Bye-laws.

In any case he thinks it is absolutely necessary that the bye-laws for the regulation of slaughter houses, which are extremely meagre, should be enlarged, so that more control might be obtained over them. The following is a summary of the bye-laws—

No. 1.—The slaughter houses to be open to all members of the Council, the Medical Officer, the Inspector of Nuisances, and every Police Constable, for the purpose of inspection.

No. 2.—The slaughter house to be ventilated to the satisfaction of the Medical Officer of Health or Inspectors, and to be lime-washed twice a year.

No. 3.—Covered tubs, boxes, or vessels to be kept for receiving and conveying away offal, &c., which are to be removed away twice a week, between 10 p.m. and 8 a.m. The blood is not to be allowed to flow into the sewers.

No. 5.—Hides and skins to be removed within two days.

No. 6.—No access or opening to a privy or midden from slaughter house to be made, or if already made to remain. Pigs or other animals not to be kept in a slaughter house, except for the purpose of being fasted previous to killing.

No. 7.—The slaughter houses to be washed and cleaned within three hours after slaughtering.

Deficiency of the bye-laws.

In these bye-laws there is not a single word as to the nature of the building in which slaughtering is to be permitted. Nothing is said about the walls, the floors, a supply of water, light, the size or situation of the hunger houses, nor anything that would make the slaughter houses sanitarily fit for their purpose.

There is no bye-law by which occupiers can be compelled to close their shops while slaughtering, and whereby a grave public scandal can be prevented. They are for all practical purposes very deficient.

INSPECTION OF MEAT.

Special inspection on Saturdays.

Inspectors McKay and Jobling continue to give special attention to this inspection. In addition to the usual examinations at the slaughter-houses, they also visit the High-street market every Saturday about noon, and again in the evening. It is, therefore, almost impossible for diseased meat to be smuggled into the town.

During the year, in three seizures, 1,288 pounds of beef and mutton were condemned. And in four seizures, 526 pounds of pork and ham were removed, and destroyed. In Table XV. fuller information will be found.

ASHPIT CLEANSING.*

Change in the time of cleansing the middens.

During the year considerable attention was given to the cleansing of the middens. Prior to the month of May, it had been the custom to empty these during the morning and forenoon, the result, of course, being that an intolerable nuisance was caused to persons who had occasion to use the back streets.

Complaints were frequently made at the Health Office, especially by the working classes, that they could not eat their meals, enter nor leave their houses by the back entrances, nor allow their children into the back streets while the men were emptying the middens. Many also complained of sickness, headache, &c.

On the matter being reported by the Medical Officer to the Health Committee, after considerable discussion and reference to sub-committee, it was resolved that in future they be emptied

* *Vide* Medical Officer's Annual Report for 1882, pages 67, 68, and 69.

between the hours of 12 midnight and 8 a.m. This change was greatly appreciated, and the action of the Committee was much applauded by the public.

This is the first step in the right direction, and it is the earnest desire of the Medical Officer that these costly relics of barbarism should be entirely done away with, and replaced by water-closets, or some more modern and sanitary appliances.

Attempt to empty more systematically.

A great effort was also made to empty them more systematically and frequently than formerly, and this has been accomplished. It is not possible, however, to empty them in rotation, for several reasons, such as the the varying number of persons or tenants living in houses, and consequent necessity to empty them more frequently, the demand of some persons to have them cleansed when only a small quantity of refuse has accumulated, the large numbers which must be emptied for repairs, and the many middens which the Sanitary Inspectors feel compelled to have emptied before they are nearly full, owing to the intolerable stench which emanates from them.

Horses employed.

During the year there was an average of 26 horses per day employed emptying them, and 66,188 loads of muck were removed. In the previous year the number of loads removed was 58,991.

Ashpits cleansed.

The number of ashpits cleansed was 47,607, compared with 37,841 in 1882.

ANALYST'S REPORT.

Milk.

During the year, 82 articles of food were examined. Of these, 27 were milk. As a rule, the milks were of good quality, although in some instances they were hardly up to the Public Analysts' standard. The Borough Analyst did not, however, recommend proceedings, inasmuch as the milk came within the Somerset House standard, and consequently he felt if the cases came on for trial, and were referred thither, that a decision would probably be given against the Local Authority.

Other articles.

Out of 9 samples of lard, 1 was adulterated with $2\frac{1}{2}$ per cent. of water. Butterine was passed off as butter in two instances, out of 7 samples. In 6 samples of coffee, 4 were adulterated with from 50 to 60 per cent. of chicory. Whiskey was adulterated with water in 3 samples; 2 were unadulterated. The rums and gins examined were genuine.

Personal thanks

The Medical Officer cannot close this Report without expressing his sincerest thanks to Councillor Rickaby, the Chairman of the Health Committee, for the constant and valuable assistance he rendered to him during the year. It is not too much to say that few men could have shown greater anxiety for the abatement of sickness, or could have evinced a greater desire to do all that was possible for the welfare of the Borough. Fortified with his strong support, the Medical Officer has found his labours, in a most harrassing period of the Borough's history, comparatively lightened.

He must also express his complete approbation of the indefatigable, zealous, and willing manner in which Inspector McKay performed his work, which, it is not too much to say, was extremely heavy and hazardous.

APPENDIX.

Vital and Sanitary Statistics.

1883.

TABLE I.

Showing the Population, Inhabited Houses, Marriages, Births, and Deaths for the year 1883, and 10 years preceding.

GROSS NUMBERS.

The Year.*	Estimated Population.	No. of Inhabited Houses.	Marriages.	Registered Births	Corrected Number of Deaths.			Deaths in Public Institutions.
					Total all Ages.	Under One Year.	Under Five Years.	
1883.	**121,117**	**17,366**	**1,522**	**5,054**	**2,961**	**697**	**1,136**	**306**
1873	102,152	13,399	1,312	4,615	2,341	744	1,123	215
1874	103,872	13,718	1,160	4,260	2,435	707	1,194	164
1875	105,621	14,037	1,184	4,509	2,385	763	1,163	167
1876	107,400	14,356	1,081	4,409	2,262	662	1,101	160
1877	109,201	14,675	1,108	4,499	2,487	637	1,080	205
1878	111,049	14,994	1,125	4,641	2,864	851	1,537	207
1879	112,918	15,313	966	4,486	2,507	599	1,104	210
1880	114,819	15,632	1,133	4,372	2,901	736	1,486	227
1881	116,753	15,956	1,370	4,587	2,436	672	1,095	218
1882	119,065	16,270	1,547	4,889	3,146	904	1,574	202
Average of 10 years, 1873—82.		14,835	1,198	4,526	2,576	727	1,245	197

NOTES.

1. Population at Census, 1881=116,548= { 57,133 Males. 59,415 Females.
2. Average Number of Persons in each house at Census, 1881=7·3.
3. Area of Borough in acres—2,963, exclusive of tidal water and foreshore, but including the docks.

* For statistical purposes the Registrar General estimates the population to the middle of the year on the basis of the rate of increase ruling between the two preceding Census periods. The estimate of population may be checked by the known number of inhabited houses, and by the average number of inmates per house, as ascertained at the preceding Census.

TABLE II.

Showing the Annual Birth and Death Rates, Death Rates of Children, and proportion of Deaths in Public Institutions in a Thousand Deaths for the year 1883 and 10 years preceding.

In Year.	Birth Rate per 1000 of the Population.	Corrected Death Rate per 1000 of the Population.	Deaths of Children under 1 year per 1000 of Registered Births.	Deaths of Children under 1 year; per 1000 of Total Deaths.	Deaths of Children under 5 years; per 1000 of Total Deaths.	Deaths in Public Institutions per 1000 of Total Deaths.
1883	**41·7**	**24·4**	**137**	**235**	**383**	**103**
1873	45·1	22·9	161	317	479	91
1874	41·0	23·4	166	283	490	67
1875	42·7	22·5	169	319	487	70
1876	41·0	21·6	150	292	486	70
1877	41·2	22·7	141	256	434	82
1878	41·8	25·8	183	290	536	72
1879	39·7	22·2	133	238	440	83
1880	38·0	25·2	168	253	512	78
1881	39·2	20·8	146	275	449	89
1882	41·0	26·4	184	287	500	64
Average of 10 years, 1873—1882.	41·0	23·3	160	281	481	76

TABLE III.

SHOWING DEATHS FROM ALL CAUSES DURING THE YEAR

1883.

CAUSES OF DEATH.	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwards.	Total.
I.—Specific Febrile, or Zymotic Diseases..	85	104	56	30	24	23	17	10	4	1	..	..	354
II.—Parasitic Diseases..	..	..	..	1	..	..	..	..	..	..	..	..	1
III.—Dietic Diseases	1	..	..	..	2	1	2	..	..	..	..	..	6
IV.—Constitutional Diseases	28	71	27	59	70	53	52	34	13	3	..	..	410
V.—Developmental	100	.	..	..	..	..	..	2	42	62	21	1	228
VI.—Local Diseases	284	218	67	57	92	113	128	206	189	69	10	..	1433
VII.—Deaths from Violence	6	17	182	15	8	16	16	8	10	2	..	..	280
VIII.—Deaths from Ill-defined and not Specified Causes	194	28	5	3	2	3	5	5	3	1	..	..	249
TOTALS	698	438	337	165	198	209	220	265	261	138	31	1	2961
I.—Specific or Febrile Causes.													
1.—Miasmatic Diseases.													
Smallpox — Vaccinated	..	2	2	5	2	..	1	..	..	1	..	..	13
Smallpox — Unvaccinated	..	4	5	2	1	..	0	1	..	0	..	..	13
Smallpox — Unknown	5	5	4	4	4	3	..	1	..	..	..	..	26
Measles	5	8	3	..	..	..	..	..	..	..	..	..	16
Scarlet Fever (Scarlatina)	1	20	16	..	1	..	..	..	..	..	..	..	38
Diphtheria	2	9	5	..	..	2	..	..	..	..	..	..	18
Whooping Cough	9	13	..	..	..	..	..	..	..	..	..	..	22
Typhus Fever	..	2	7	9	7	8	6	2	..	..	..	..	41
Enteric or Typhoid Fever	..	2	13	7	5	1	3	2	..	..	..	..	33
Simple Continued or Ill-defined Fever ..	..	2	..	..	..	1	1	..	..	..	..	..	4
Other Miasmatic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..
2.—Diarrhœal Diseases.													
Simple Cholera	..	1	1	..	..	..	..	..	..	..	..	..	2
Diarrhœa, Dysentery	45	31	..	1	1	1	1	2	1	..	..	..	83
3.—Malarial Diseases.													
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous Diseases.													
Cowpox, Effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..
Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..
Splenic Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.													
Syphilis	17	3	..	..	..	1	1	..	..	..	..	..	22
Gonnorhœa, Stricture of Urethra ..	..	..	..	..	..	1	1	..	1	..	..	..	3
6.—Septic Diseases.													
Erysipelas	1	2	..	..	2	5	1	2	2	..	..	..	15
Pyæmia, Septicæmia..	..	..	..	1	..	..	2	..	..	..	..	..	3
Puerperal Fever	..	..	..	1	1	..	..	..	..	..	..	..	2
II.—Parasitic Diseases.													
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydatids	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Animal Parasitical Diseases ..	..	..	..	1	..	..	..	..	..	..	..	..	1

TABLE III.—Continued.

CAUSES OF DEATH.	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwards.	Total.
III.—Dietic Diseases.													
Starvation, Want of Breast Milk	1	..	..	..	1	..	..	..	..	..	..	..	2
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Alcoholism, Delirium Tremens	..	..	..	..	1	1	2	..	..	..	..	..	4
IV.—Constitutional Diseases.													
Rheumatic Fever and Rheumatism of the Heart	..	..	..	2	..	2	2	..	..	..	..	..	6
Rheumatism	..	..	..	2	1	..	1	1	1	..	..	..	6
Gout	..	..	..	..	..	..	..	..	..	1	..	..	1
Rickets	..	1	..	..	..	..	..	..	..	..	..	..	1
Cancer, Malignant Disease..	..	..	..	..	4	9	15	17	8	2	..	..	55
Tabes Mesenterica	6	15	1	..	..	..	..	..	..	..	..	..	22
Tubercular Meningitis, Hydrocephalus..	6	24	6	1	..	..		..	..	..	..	..	37
Phthisis	10	11	15	53	59	41	31	13	3	..	..	..	236
Other Tubercular and Scrofulous Disease	6	17	5	1	3	..	1	1	..	..	..	..	34
Purpura, Hæmorrhagic Diathesis ..	..	..	..	..	..	..	1	..	..	..	..	..	1
Anæmia, Chlorosis, Leucocythæmia ..	..	2	..	..	..	1	..	..	..	..	..	..	3
Glycosuria, Diabetes Mellitus	..	1	..	..	3	..	1	2	1	..	..	..	8
Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Developmental Diseases.													
Premature Birth	88	..	..	..	..	..	..	..	..	..	..	..	88
Atelectasis	7	..	..	..	..	.	...	..	..	..	..	..	7
Congenital Malformations	5	..	..	..	..	..	..	..	..	..	..	..	5
Old Age	..	..	..	..	..	..	..	2	42	62	21	1	128
VI.—Local Diseases.													
1.—Diseases of Nervous System.													
Inflammation of Brain or Membranes ..	26	37	14	2	2	4	1	..	..	1	..	..	87
Apoplexy	..	..	..	1	1	8	9	17	17	8	..	..	61
Softening of Brain	..	..	1	1	..	3	4	5	6	3	1	..	24
Hemiplegia	..	..	..	..	..	..	..	3	2	1	..	..	6
Brain Paralysis	..	..	..	..	..	..	2	..	..	..	..	..	2
Insanity, General Paralysis of the Insane	..	..	..	..	..	..	..	..	..	..	..	..	..
Epilepsy	..	2	1	1	3	2	..	..	1	..	..	..	10
Convulsions	98	20	2	..	1	..	..	..	..	..	..	..	121
Laryngismus Stridulus	1	..	..	..	..	..	..	..	1	..	..	..	2
Paralysis Agitans	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraplegia	..	1	..	..	..	4	5	13	19	10	3	..	55
Diseases of Spinal Cord	1	1	..	..	..	..	..	..	..	..	..	..	2
Other Diseases of Nervous System ..	1	5	2	2	2	4	5	10	5	2	..	..	38
2.—Diseases of Organs of Special Sense.													
Ear, Diseases of	..	..	..	..	..	..	..	..	..	..	..	..	..
Eyes „	..	..	..	..	..	..	..	..	..	..	..	..	..
Nose „	..	..	..	..	..	..	..	..	..	..	..	..	..
3.—Diseases of Circulatory System.													
Endocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Valvular Diseases of Heart..	..	..	1	2	2	1	2	3	3	1	..	..	15
Pericarditis	..	..	3	2	2	2	2	2	1	..	..	..	14
Other Diseases of Heart	..	1	6	11	16	21	28	41	39	10	1	..	174
Aneurism	..	..	..	..	..	2	..	1	1	..	..	..	4
Embolism, Thrombosis	..	..	..	..	..	1	1	..	..	..	..	..	2
Other Diseases of Blood Vessels	..	..	..	..	1	1	1	4	..	..	..	..	7
4.—Diseases of Respiratory System.													
Croup	4	27	3	..	..	..	..	..	..	..	..	..	34
Laryngitis	2	3	1	..	3	1	1	1	..	..	..	..	12
Bronchitis	76	42	5	4	13	12	18	43	50	19	3	..	285
Pneumonia	34	35	9	7	12	13	12	17	12	4	1	..	156
Pleurisy	..	1	2	1	2	1	1	3	..	..	..	..	11
Emphysema	..	..	1	..	..	..	2	1	2	..	..	..	6
Asthma	..	..	1	..	..	..	1	4	..	..	..	..	6
Other Diseases of Respiratory System ..	6	6	1	1	..	1	1	1	..	1	..	..	18

TABLE III.—Continued.

CAUSES OF DEATH.	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwards.	Totals.
VI.—Local Diseases—Contd.													
5.—Diseases of Digestive System.													
Dentition	14	19	..	..	..	..	..	..	..	..	..	..	33
Sore Throat, Quinsey	..	1	..	..	..	..	..	1	..	..	..	..	2
Diseases of Stomach	1	3	..	1	..	2	1	4	4	1	..	..	17
Enteritis	4	4	1	2	1	2	1	2	..	..	..	..	17
Peritonitis	1	2	3	4	8	1	2	..	3	..	..	..	24
Obstructive Diseases of Intestine	2	..	2	..	..	1	2	3	3	..	..	..	13
Ascites	..	..	..	..	..	1	..	..	..	..	..	..	1
Cirrhosis of Liver	..	..	1	..	1	4	4	8	4	1	..	..	23
Other Diseases of Liver	4	..	1	4	2	1	8	10	5	..	..	..	35
Other Diseases of Digestive System	5	1	..	..	..	4	1	1	2	..	..	..	14
6.—Diseases of Lymphatic System.													
Lymphatics and Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..
7.—Diseases of Glandlike Organs of Uncertain Use.													
Bronchocele	1	..	..	..	..	..	1	..	..	..	..	..	2
Addison's Disease	..	..	..	..	..	..	..	..	..	..	..	..	..
8.—Diseases of Urinary System.													
Nephritis	..	3	1	1	1	3	2	1	1	1	..	..	14
Bright's Disease, Albuminuria	..	..	.	1	5	2	2	4	..	..	..	..	14
Disease of Bladder	..	..	1	1	..	..	..	..	..	2	..	..	4
,, Prostate	..	..	..	..	..	..	..	..	2	..	..	..	2
Other Diseases of the Urinary System	..	1	2	..	1	2	1	1	1	..	..	..	9
9.—Diseases of Re-productive System.													
A.—*Of Organs of Generation.*													
Male Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	..	..
Female Organs ,,	..	..	..	1	2	2	1	..	1	1	..	..	8
B.—*Of Parturition.*													
Abortion, Miscarriage	..	..	..	..	..	1	..	..	..	..	..	..	1
Puerperal Convulsions	..	..	..	..	1	..	..	..	..	..	..	..	1
Placenta Prævia, Flooding	..	..	..	..	1	..	..	..	..	..	..	..	1
Other Accidents of Child Birth	..	..	..	4	6	6	..	..	..	..	..	..	16
10.—Diseases of Bones and Joints.													
Caries, Necrosis	..	..	1	1	..	..	1	..	..	..	..	..	3
Arthritis, Ostitis, Periostitis	..	..	..	..	1	..	..	..	..	..	..	..	1
Other Diseases of Bones and Joints	..	..	1	1	..	..	4	1	2	3	1	..	13
11.—Diseases of Integumentary System.													
Carbuncle	..	..	..	..		..	..	..	1	..	..	..	1
Phlegmon	..	..	..	..	..	..	..	..	..	..	..	..	..
Cellulitis	..	..	..	..	1	..	1	..	..	..	..	..	2
Other Diseases of Integumentary System	3	3	..	1	1	..	..	1	1	..	..	..	10
VII.—Violence.													
I.—Accident or Negligence.													
Fracture or Contusion	..	..	5	8	2	8	4	4	6	1	..	..	38
Gunshot Wound	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	..	1	..	..	..	1	..	..	..	2
Burn and Scald	1	7	2	..	..	..	..	1	..	..	..	..	11
Poison	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning	..	..	2	2	3	7	4	2	..	..	..	..	20
Suffocation*	4	9	172	2	1	..	3	..	..	1	..	..	192
Otherwise	1	1	1	3	..	..	1	1	2	..	..	..	10
Homicide } Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..
Homicide } Murder	..	..	..	..	..	..	1	..	..	..	..	..	1
Suicide	..	..	..	..	1	1	3	..	1	..	..	..	6
VIII—Deaths from Ill-defined Causes.													
Dropsy	1	2	1	1	..	1	..	..	..	1	..	..	7
Debility	100	5	..	1	..	..	1	2	..	..	..	..	109
Marasmus and Atrophy	77	19	2	..	..	1	..	..	..	..	..	..	99
Inanition	9	..	..	..	..	..	..	..	..	..	..	..	9
Sudden Death	..	..	1	..	..	..	..	..	..	..	..	..	1
Other causes not specified or Ill-defined	7	2	1	1	2	1	4	3	3	..	..	..	24
TOTALS	697	439	337	164	198	213	217	269	261	135	30	1	2961

* 178 of these deaths were caused by the Victoria Hall Catastrophe.

SUMMARY OF TABLE III.

	No. of Deaths.
I.—Specific Febrile, or Zymotic Diseases	..
1. Miasmatic Diseases	224
2. Diarrhœal ,, ...	85
3. Malarial ,, ...	..
4. Zoogenous ,, ...	..
5. Venereal ,, ...	25
6. Septic ,, ...	20
II.—Parasitic Diseases	1
III.—Dietic Diseases	6
IV.—Constitutional Diseases	410
V.—Developmental Diseases	228
VI.—Local Diseases	..
1. Diseases of Nervous System	408
2. Diseases of Organs of Special Sense ..	..
3. Diseases of Circulatory System	216
4. Diseases of Respiratory System	528
5. Diseases of Digestive System	179
6. Diseases of Lymphatic System	..
7. Diseases of Gland-like Organs of uncertain use..	2
8. Diseases of Urinary System	43
9. Diseases of Reproductive System	..
(a) Diseases of Organs of Generation ..	8
(b) Diseases of Parturition	19
10. Diseases of Bones and Joints	17
11. Diseases of Integumentary System ..	13
VII.—Violence	..
1. Accident or Negligence	273*
2. Homicide	1
3. Suicide	6
4. Execution	..
VIII.—Ill-Defined and not specified Causes ..	249
Total	2,961

* 178 of these deaths were caused by the Victoria Hall Catastrophe.

TABLE IIIA.

SHEWING THE DEATHS REGISTERED FROM ALL CAUSES IN EACH QUARTER.

CAUSES OF DEATH.	1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.			Totals.
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	
I.—Specific Febrile, or Zymotic Diseases	15	32	49	14	16	34	33	32	35	23	24	47	354
II.—Parasitic Diseases..	..	..	1	..	..	..	..	..	..	..	..	..	1
III.—Dietic Diseases	..	..	2	1	..	..	..	..	1	..	..	2	6
IV.—Constitutional Diseases	3	24	90	8	20	77	9	16	64	8	11	80	410
V.—Developmental Diseases ..	24	..	39	29	..	32	23	..	31	24	..	26	228
VI.—Local Diseases	91	76	301	64	56	221	66	48	197	62	40	211	1433
VII.—Deaths from Violence	2	4	27	..	2	28	3	7	189	2	3	13	280
VIII.—Deaths from Ill-defined and not Specified Causes	45	11	6	46	6	9	68	5	6	35	6	6	249
TOTALS	180	147	515	162	100	401	202	108	523	154	84	385	2961
I.—Specific or Febrile Causes.													
1.—Miasmatic Diseases.													
Smallpox — Vaccinated	..	..	..	..	..	..	..	2	3	..	..	8	13
Smallpox — Unvaccinated	..	..	1	..	..	2	..	1	3	..	3	3	13
Smallpox — Unknown	..	..	1	..	..	..	1	1	3	4	4	12	26
Measles	4	6	..	..	2	1	.	..	1	1	..	1	16
Scarlet Fever (Scarlatina)	..	10	7	..	7	3	..	1	1	1	2	6	38
Diphtheria	2	3	2	..	1	..	..	2	2	..	3	3	18
Whooping Cough	4	8	..	3	2	..	..	1	..	2	2	..	22
Typhus Fever..	..	2	19	..	..	10	..	..	5	..	..	5	41
Enteric or Typhoid Fever	..	1	8	..	..	13	..	1	6	..	..	4	33
Simple Continued or Ill-defined Fever ..	..	..	1	..	1	1	..	1	..	..	..	..	4
Other Miasmatic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..
2.—Diarrhœal Diseases.													
Simple Cholera	..	..	..	..	..	..	..	1	1	..	..	..	2
Diarrhœa, Dysentery	..	2	..	5	2	..	29	19	5	11	8	2	83
3.—Malarial Diseases.													
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous Diseases.													
Cowpox, Effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..
Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..
Splenic Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.													
Syphilis	5	..	1	5	1	1	3	1	..	4	1	..	22
Gonnorhœa, Stricture of Urethra ..	..	..	2	..	..	..	..	..	1	..	..	..	3
6.—Septic Diseases.													
Erysipelas	..	..	5	1	..	2	..	1	3	..	1	2	15
Pyæmia, Septicæmia..	..	..	1	..	..	..	..	..	1	..	..	1	3
Puerperal Fever	..	..	1	..	..	1	..	..	..	..	..	..	2
II.—Parasitic Diseases.													
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydatids	..	.	..	..	..	..	..	..	..	..	..	..	..
Other Animal Parasitical Diseases ..	..	..	1	..	..	..	..	..	..	..	..	..	1

TABLE IIIA.—Continued.

CAUSES OF DEATH.	1st Quarter.			2nd Quarter.			3rd Quarter			4th Quarter.			Total.
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	
III.—Dietic Diseases.													
Starvation, Want of Breast Milk	..	..	1	1	..	..	..	..	..	..	..	..	2
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Alcoholism, Delirium Tremens	..	..	1	..	..	..	..	..	1	..	..	2	4
IV.—Constitutional Diseases.													
Rheumatic Fever and Rheumatism of the Heart	..	..	..	..	..	2	..	..	4	..	..	..	6
Rheumatism	..	..	..	..	..	2	..	..	3	..	..	1	6
Gout	..	..	1	..	..	..	..	..	..	..	..	..	1
Rickets	..	..	..	..	..	..	..	1	..	..	..	..	1
Cancer, Malignant Disease..	..	..	21	..	..	9	..	..	10	..	..	15	55
Tabes Mesenterica	..	4	..	1	4	1	3	3	..	2	4	..	22
Tubercular Meningitis, Hydrocephalus..	..	8	..	3	7	4	..	6	1	3	3	2	37
Phthisis..	2	4	62	2	2	54	3	3	45	3	2	54	236
Other Tubercular and Scrofulous Disease	1	7	4	2	6	4	3	2	..	..	2	3	34
Purpura, Hæmorrhagic Diathesis ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Anæmia, Chlorisis, Leucocythæmia ..	..	..	..	..	1	..	..	1	..	..	..	1	3
Glycosuria, Diabetes Mellitus	..	1	2	..	..	1	..	..	1	..	..	3	8
Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Developmental Diseases.													
Premature Birth	21	..	..	27	..	..	19	..	..	21	..	..	88
Atelectasis	2	..	..	2	..	..	2	..	..	1	..	..	7
Congenital Malformations	1	..	..	..	..	..	2	..	..	2	..	..	5
Old Age..	..	..	39	..	..	32	..	..	31	..	..	26	128
VI.—Local Diseases.													
1.—*Diseases of Nervous System.*													
Inflammation of Brain or Membranes ..	3	12	9	10	10	6	9	9	5	4	6	4	87
Apoplexy	..	..	22	..	..	14	..	..	10	..	..	15	61
Softening of Brain	..	..	4	..	..	5	..	..	9	..	..	6	24
Hemiplegia	..	..	..	..	..	2	..	..	1	..	..	3	6
Brain Paralysis	..	..	1	..	..	..	..	..	1	..	..	..	2
Insanity, General Paralysis of the Insane	..	..	..	..	..	..	..	..	..	..	..	..	..
Epilepsy	..	1	4	..	1	2	..	..	2	..	..	..	10
Convulsions	34	6	..	22	5	..	25	5	2	17	4	1	121
Laryngismus Stridulus	..	..	1	..	..	..	..	..	..	1	..	..	2
Paralysis Agitans	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraplegia	..	..	16	..	1	12	..	..	12	..	..	14	55
Diseases of Spinal Cord	..	..	..	..	..	..	1	1	..	..	..	..	2
Other Diseases of Nervous System ..	..	2	8	1	3	6	..	..	8	..	..	10	38
2.—*Diseases of Organs of Special Sense.*													
Ear, Diseases of	..	..	..	..	..	..	..	..	..	..	..	..	..
Eyes ,, ...	..	..	..	..	..	..	..	..	..	..	..	..	..
Nose ,, ...	..	..	..	..	..	..	..	..	..	..	..	..	..
3.—*Diseases of Circulatory System.*													
Endocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Valvular Diseases of Heart..	..	..	3	..	..	3	..	..	3	..	..	6	15
Pericarditis	..	..	4	..	..	5	..	..	2	..	..	3	14
Other Diseases of Heart	..	..	49	..	..	38	..	1	50	..	..	36	174
Aneurism	..	..	1	..	..	..	..	..	2	..	..	1	4
Embolism, Thrombosis	..	..	1	..	..	..	..	..	..	..	..	1	2
Other Diseases of Blood Vessels	..	..	2	..	..	3	..	..	..	..	..	2	7
4.—*Diseases of Respiratory System.*													
Croup	1	10	1	1	6	..	1	5	1	1	6	1	34
Laryngitis	..	1	3	..	1	2	2	1	1	..	..	1	12
Bronchitis	31	17	76	13	7	43	14	9	19	18	9	29	285
Pneumonia	11	17	34	10	11	16	3	4	17	10	3	20	156
Pleurisy..	..	..	4	..	..	3	..	..	2	..	1	1	11
Emphysema	..	..	2	..	..	..	..	..	..	..	..	4	6
Asthma	..	..	1	..	..	1	..	..	2	..	..	2	6
Other Diseases of Respiratory System ..	4	2	4	1	2	1	..	..	1	1	2	..	18

TABLE IIIA.—Continued.

CAUSES OF DEATH.	1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.			Total.
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	
VI.—Local Diseases—Contd.													
5.—Diseases of Digestive System.													
Dentition	4	4	..	1	5	..	4	6	..	5	4	..	33
Sore Throat, Quinsey	..	..	..	..	1	..	..	..	1	..	..	..	2
Diseases of Stomach	.	1	5	..	1	4	1	..	3	..	1	1	17
Enteritis	..	1	2	..	..	..	2	2	3	2	1	4	17
Peritonitis	..	1	4	..	..	5	..	1	4	1	..	8	24
Obstructive Diseases of Intestine	..	..	3	1	..	4	..	..	4	1	..	..	13
Ascites	..	..	1	..	..	..	..	..	..	..	..	..	1
Cirrhosis of Liver	..	..	6	..	..	8	..	..	3	..	..	6	23
Other Diseases of Liver	2	..	3	1	..	9	1	..	10	..	..	9	35
Other Diseases of Digestive System	..	..	1	1	..	4	3	1	1	1	..	2	14
6.—Diseases of Lymphatic System.													
Lymphatics and Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..
7.—Diseases of Glandlike Organs of Uncertain Use.													
Bronchocele	..	..	1	..	..	..	..	1	..	..	..	..	2
Addison's Disease	..	..	..	..	..	..	..	..	..	..	..	..	..
8.—Diseases of Urinary System.													
Nephritis	..	1	2	..	..	4	..	..	3	..	2	2	14
Bright's Disease, Albuminuria	..	..	6	..	..	1	..	..	3	..	..	4	14
Disease of Bladder	..	..	1	..	..	1	..	..	1	..	..	1	4
,, Prostate	..	..	..	..	..	1	..	..	..	..	..	1	2
Other Diseases of the Urinary System	..	..	4	..	..	3	..	..	1	..	1	..	9
9.—Diseases of Re-productive System.													
A.—*Of Organs of Generation.*													
Male Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	..	..
Female Organs ,,	..	..	3	..	..	4	..	..	..	..	..	1	8
B.—*Of Parturition.*													
Abortion, Miscarriage	..	..	1	..	..	..	..	..	..	..	..	..	1
Puerperal Convulsions	..	..	..	..	..	1	..	..	..	..	..	..	1
Placenta Prævia, Flooding	..	..	..	..	..	..	..	..	1	..	..	..	1
Other Accidents of Child Birth	.	..	4	..	..	5	..	..	4	..	..	3	16
10.—Diseases of Bones and Joints.													
Caries, Necrosis	..	..	..	..	..	1	..	..	..	..	..	2	3
Arthritis, Ostitis, Periostitis	..	..	..	..	..	..	..	..	1	..	..	..	1
Other Diseases of Bones and Joints	..	..	3	..	1	3	..	..	1	..	..	5	13
11.—Diseases of Integumentary System.													
Carbuncle	..	..	..	..	..	1	..	..	..	..	..	..	1
Phlegmon	..	..	..	..	..	..	..	..	..	..	..	..	..
Cellulitis	..	..	1	..	..	..	..	..	1	..	..	..	2
Other Diseases of Integumentary System	1	..	..	2	1	..	..	2	2	..	..	2	10
VII.—Violence.													
1.—Accident or Negligence.													
Fracture or Contusion	..	..	10	..	..	11	..	..	8	..	..	9	38
Gunshot Wound	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	1	..	..	..	..	..	1	..	..	..	2
Burn and Scald	..	4	1	..	..	1	1	..	..	1	2	1	11
Poison	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning	..	..	8	..	.	9	..	..	2	..	..	1	20
Suffocation*	1	..	3	..	1	3	2	7	173	1	1	..	192
Otherwise	1	..	2	..	1	1	..	..	4	..	..	1	10
Homicide { Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..
Homicide { Murder	..	..	1	..	..	..	..	..	..	..	..	..	1
Suicide	..	..	1	..	..	3	..	..	1	..	..	1	6
VIII—Deaths from Ill-defined Causes.													
Dropsy	1	1	3	..	..	1	..	1	..	..	..	..	7
Debility	27	1	1	22	1	..	27	3	2	24	..	1	109
Marasmus and Atrophy	15	9	2	17	4	..	34	..	..	11	6	1	99
Inanition	1	..	..	6	..	..	2	..	..	..	..	..	9
Sudden Death	..	..	..	.	..	1	..	..	..	..	..	..	1
Other causes not specified or Ill-defined	1	..	..	1	1	7	5	1	4	..	..	4	24
TOTAL	180	147	515	162	100	401	202	108	523	154	84	385	2961

* 178 of these Deaths were caused by the Victoria Hall Catastrophe.

TABLE IIIB.

SHOWING THE DEATHS FROM ALL CAUSES REGISTERED IN EACH DISTRICT DURING THE YEAR 1883.

CAUSES OF DEATH.	Sunderland East.			Sunderland West.			Bishopwth North.			Bishopwth South.			Monkwearmouth.		
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.
I.—Specific Febrile, or Zymotic Diseases	5	8	8	8	8	3	21	38	92	19	23	31	31	28	31
II.—Parasitic Diseases..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
III.—Dietic Diseases	..	..	..	..	..	1	..	..	1	..	..	3	..	..	1
IV.—Constitutional Diseases	2	8	20	..	2	18	13	31	118	2	8	97	11	22	58
V.—Developmental Diseases ..	6	..	8	6	..	6	36	..	61	19	..	29	33	..	24
VI.—Local Diseases	42	22	72	24	17	54	64	64	313	101	64	299	53	54	190
VII.—Deaths from Violence	..	.	5	..	..	9	2	5	28	2	9	20	3	2	11
VIII.—Deaths from Ill-defined and not Specified Causes	16	2	2	15	1	1	45	4	10	61	7	7	56	13	9
TOTALS	71	40	115	53	28	92	181	142	623	204	111	670	187	119	325
I.—Specific or Febrile Causes.															
1.—Miasmatic Diseases.															
Smallpox — Vaccinated	..	..	1	..	..	..	..	2	7	..	..	3	..	..	..
Smallpox — Unvaccinated	..	..	..	..	..	..	..	3	7	..	1	2	..	..	..
Smallpox — Unknown	2	..	..	..	..	..	2	5	16	..	..	..	1	..	..
Measles	..	..	..	1	1	..	1	2	1	..	..	1	3	5	1
Scarlet Fever (Scarlatina)	..	1	1	..	..	..	..	5	5	..	6	7	1	8	4
Diphtheria	..	..	..	1	1	1	1	3	3	..	5	2	..	..	1
Whooping Cough	..	1	..	..	2	..	1	4	..	5	3	..	2	4	..
Typhus Fever..	..	..	..	..	..	..	..	2	31	..	..	3	..	..	5
Enteric or Typhoid Fever	..	..	5	..	1	1	..	..	9	..	..	7	..	1	9
Simple Continued or Ill-defined Fever ..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	1
Other Miasmatic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2.—Diarrhœal Diseases.															
Simple Cholera	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Diarrhœa, Dysentery	2	3	..	5	2	1	9	11	..	11	6	2	18	9	4
3.—Malarial Diseases.															
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous Diseases.															
Cowpox, Effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Splenic Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.															
Syphilis	1	..	..	1	..	..	7	1	2	2	1	..	6	1	..
Gonnorhœa, Stricture of Urethra ..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..
6.—Septic Diseases.															
Erysipelas	..	..	..	..	1	..	..	..	5	1	1	3	..	..	4
Pyæmia, Septicæmia..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
II.—Parasitic Diseases.															
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydatids	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Animal Parasitical Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1

TABLE IIIB.—Continued.

CAUSES OF DEATH.	Sunderland East.			Sunderland West.			Bishopwth North.			Bishopwth South.			Monkwearmouth.		
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.
II.—Dietic Diseases.															
tarvation, Want of Breast Milk	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..
curvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
hronic Alcoholism, Delirium Tremens	..	..	..	..	..	..	..	..	1	..	..	3	..	..	..
V.—Constitutional Diseases.															
heumatic Fever and Rheumatism of the Heart	..	..	..	..	..	1	..	..	2	..	..	2	..	.	1
heumatism	..	..	..	..	..	..	..	..	2	..	..	3	..	..	..
out	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
ickets	.	..	..	..	..	..	..	..	..	..	..	..	..	1	..
ancer, Malignant Disease..	..	..	3	..	..	1	..	..	21	..	..	18	..	..	12
abes Mesenterica	..	2	..	..	..	..	2	8	..	1	..	1	3	5	..
ubercular Meningitis, Hydrocephalus..	..	2	..	..	1	..	2	12	4	..	4	2	4	5	1
hthisis	1	1	14	..	1	14	7	6	86	1	..	61	1	3	40
ther Tubercular and Scrofulous Disease	1	3	2	..	..	2	2	5	2	..	1	3	3	8	3
urpura, Hæmorrhagic Diathesis ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
næmia, Chlorosis, Leucocythæmia ..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..
lycosuria, Diabetes Mellitus	..	..	1	..	..	..	..	..	..	..	1	5	..	..	1
ther Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
I.—Developmental Diseases.															
remature Birth	6	..	..	5	..	..	33	..	..	16	..	..	28	..	..
telectasis	..	..	..	..	..	..	2	..	..	1	..	..	4	..	..
ongenital Malformations	..	..	..	1	..	..	1	..	..	2	..	..	1	..	..
ld Age	..	..	8	..	..	6	..	..	61	..	..	29	..	..	24
VI.—Local Diseases.															
1. Diseases of Nervous System.															
nflammation of Brain or Membranes ..	4	2	1	..	1	4	4	6	8	11	16	7	7	12	4
poplexy	..	..	5	..	..	4	..	..	28	..	..	13	..	..	11
oftening of Brain	..	..	..	..	..	..	..	..	7	..	..	8	..	..	9
Hemiplegia	..	..	..	..	..	..	..	..	3	..	..	..	..	..	3
Brain Paralysis	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
nsanity, General Paralysis of the Insane	..	..	..	.	..	..	..	..	..	..	..	..	..	..	.
Epilepsy	..	..	1	..	..	1	..	2	3	..	..	..	..	..	3
Convulsions	11	6	..	6	..	..	26	7	1	38	2	..	17	5	2
Laryngismus Stridulus	..	..	..	..	..	..	..	..	..	1	..	1	..	..	.
Paralysis Agitans	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.
Paraplegia	..	..	3	..	..	..	..	..	17	..	1	23	..	..	11
Diseases of Spinal Cord	..	..	..	..	..	..	1	..	1	..	..	..	..	..	.
Other Diseases of Nervous System ..	..	..	1	..	1	1	..	2	17	..	1	6	1	1	7
2. Diseases of Organs of Special Sense.															
Ear, Diseases of	..	..	..	..	..	..	..	..	..	.	..	..	..	..	.
Eyes „	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.
Nose „	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.
3. Diseases of Circulatory System.															
Endocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.
Valvular Diseases of Heart..	..	..	..	..	..	..	..	..	4	..	..	8	..	..	8
Pericarditis	..	..	2	..	..	2	..	..	1	..	..	7	..	..	2
Other Diseases of Heart	..	..	11	..	..	8	..	..	64	..	..	46	..	1	44
Aneurism	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1
Embolism, Thrombosis	..	..	..	..	..	..	..	..	1	..	..	1	..	..	.
Other Diseases of Blood Vessels	..	..	..	..	..	..	..	..	4	..	..	2	..	..	1
4.—Diseases of Respiratory System.															
Croup	1	6	..	..	2	1	1	6	1	1	8	1	1	5	.
Laryngitis	1	..	2	..	1	1	1	1	2	..	1	2	..	..	.
Bronchitis	17	3	20	14	3	15	13	9	58	25	17	48	7	10	26
Pneumonia	2	1	10	3	2	4	10	12	21	7	8	32	12	12	20
Pleurisy	..	..	1	..	..	..	..	..	3	..	..	5	..	1	1
Emphysema	..	..	..	..	..	..	..	..	6	..	..	..	..	..	.
Asthma	..	..	..	..	..	1	..	..	2	..	..	1	..	..	2
Other Diseases of Respiratory System ..	..	1	..	..	..	1	3	3	1	3	1	3	..	1	1

TABLE IIIB.—Continued.

CAUSES OF DEATH.	Sunderland East.			Sunderland West.			Bishopwth North.			Bishopwth South.			Monkwearmouth.		
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.
—Local Diseases—Contd.															
5.—Diseases of Digestive System.															
tition	3	1	..	1	2	..	2	12	..	7	1	..	1	3	..
Throat, Quinsey	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..
eases of Stomach..	..	1	1	..	1	1	..	..	6	1	1	3	..	..	2
eritis	1	..	1	..	3	2	..	..	..	2	1	5	1	..	1
tonitis	..	..	4	..	..	1	..	1	4	..	1	9	1	..	3
tructive Diseases of Intestine ..	1	..	..	..	..	1	1	..	5	..	..	4	..	..	1
sites	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
hosis of Liver	..	..	4	..	..	..	..	..	5	..	..	13	..	..	1
er Diseases of Liver	..	..	3	..	..	2	..	..	6	2	..	14	2	..	6
er Diseases of Digestive System ..	..	..	..	..	..	..	1	1	2	3	..	2	1	..	4
6.—Diseases of Lymphatic System.															
mphatics and Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7.—Diseases of Glandlike Organs of Uncertain Use.															
nchocele	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
dison's Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8.—Diseases of Urinary System.															
phritis	..	..	1	..	1	2	..	1	6	..	..	1	..	1	1
ght's Disease, Albuminuria	..	..	1	..	..	..	..	..	4	..	..	6	..	..	3
ease of Bladder	..	..	..	..	..	..	..	..	1	..	..	2	..	..	1
„ Prostate	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..
er Diseases of Urinary System ..	..	..	1	..	..	1	..	..	2	..	1	4	..	..	..
9.—Diseases of Re-productive System.															
A.—*Of Organs of Generation.*															
le Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
males Organs „	..	..	..	..	..	..	..	..	2	..	..	3	..	..	3
B.—*Of Parturition.*															
ortion, Miscarriage	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
erperal Convulsions	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
acenta Prævia, Flooding..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
her Accidents of Child Birth	..	..	..	..	..	..	..	..	4	..	..	7	..	..	5
10.—Diseases of Bones and Joints.															
ries, Necrosis	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..
thritis, Ostitis, Periostitis	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
her Diseases of Bones and Joints ..	..	..	..	..	..	1	..	..	5	..	1	3	..	..	3
11.—Diseases of Integumentary System.															
rbuncle	..	..	..	..	..	..	..	..	..	..	..	.	..	..	1
legmon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
llulitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
her Diseases of Integumentary System	1	..	..	..	..	1	1	..	..	..	2	2	1	1	1
I.—Violence.															
1.—Accident or Negligence.															
acture and Contusion	..	..	2	..	..	1	..	..	7	..	..	20	..	..	8
nshot Wound	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
t, Stab	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
rn and Scald	..	..	..	..	..	..	..	3	2	1	2	1	1	1	..
ison	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
rowning	..	..	2	..	..	5	..	..	8	..	..	3	..	..	2
affocation *	..	.	..	..	..	1	2	1	5	1	7	173	1	1	..
herwise	..	..		..	..	..	..	1	4	..	..	3	1	..	1
omicide { Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
omicide { Murder	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
icide	..	..	1	..	..	..	..	..	2	..	..	3	.	..	..
III—Deaths from Ill-defined Causes.															
ropsy		..	..	..	..	1	..	..	2	..	1	1	..	1	1
ebility	7	..	..	10	..	..	28	2	2	28	..	2	27	3	..
arasmus and Atrophy	7	..	1	5	1	..	14	2	1	28	6	1	23	9	1
anition	..	..	..	..	..	..	2	..	..	3	.	..	4	..	..
dden Death..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
ther causes not specified or ill-defined	2	2	1	..	..	..	1	..	4	2	..	3	2	..	7
TOTAL	71	40	115	53	28	92	181	142	623	204	111	670	187	119	325

* 178 of these Deaths were caused by the Victoria Hall Calamity.

TABLE IV.

Showing the number of Deaths at all ages in 1883, from certain groups of Diseases, and proportions to 1000 of population, and to 1000 Deaths from all causes; also, the number of Deaths of Infants under one year of age from other groups of Diseases, and proportions to 1000 Births and to 1000 Deaths from all causes under one year.

Division I. (Adults.)	Total Deaths.	Deaths per 1000 of Population at all ages.	Deaths per 1000 of Total Deaths, at all ages.
1. Principal Zymotic Diseases	309	2·5	104·3
2. Pulmonary Diseases ..	464	3·8	156·7
3. Principal Tubercular Diseases	296	2·2	99·9
Division II. (Infants under One Year.)	**Total Deaths.**	**Deaths per 1000 of Births.**	**Deaths per 1000 of Total Deaths under One Year.**
4. Wasting Diseases ..	266	52·0	38·0
5. Convulsive Diseases ..	144	27·4	137·9

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus, Enteric (or Typhoid), and Simple Continued Fevers, and Diarrhœa.
2. Includes Phthisis, Scrofula, Tuberculosis, Rickets, and Tabes.
3. Includes Marasmus, Atrophy, Debility, Want of Breast Milk, and Premature Birth.
4. Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE V.

Showing the Number of Deaths from the Principal Zymotic Diseases, in the 10 Years, 1873 to 1882, and in the Year 1883.

DISEASES.	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	Annual Average Number of Deaths in 10 Years* 1873-82	Proportion of Deaths to 1000 Deaths in 10 Years, 1873-82	Total Deaths in 1883	Proportion of Deaths to 1000 Deaths in 1883
Smallpox	1	..	..	..	..	1	..	..	..	1	0·3	0·11	52	17·5
Measles	31	59	5	42	1	93	1	99	3	191	52·5	20·4	16	5·4
Scarlet Fever	29	140	61	133	138	186	243	312	145	168	155·5	60·3	38	12·8
Diphtheria	13	13	8	9	15	14	10	3	8	18	11·1	4·4	18	5·9
Whooping Cough	48	17	133	53	63	175	44	73	40	106	75·2	2·9	22	7·2
Fevers. Typhus	27	24	21	19	26	23	4	15	5	34	19·8	7·1	41	13·8
Fevers. Enteric	18	29	21	34	35	30	23	27	22	42	28·1	10·3	33	11·1
Fevers. Simple Continued or Ill-defined	2	8	3	9	6	2	3	7	5	11	5·6	2·1	4	1·3
Diarrhœa	155	165	141	146	82	204	73	203	90	129	138·8	53·6	85	28·7
Totals	324	455	393	445	366	728	401	739	318	700	486·9	188·3	309	104·4
Zymotic Death Rate	3·17	4·38	3·72	4·14	3·35	6·54	3·55	6·43	2·63	5·87	..	..	..	2·55

*If the decimal point be removed and the numbers read as whole numbers, the figures will then give the actual number of Deaths from each Disease for 10 Years.

TABLE VI.

TABLE OF DEATHS

REGISTERED IN THE BOROUGH FOR THE YEAR ENDING DECEMBER 29TH, 1883.

DISTRICTS.	Population.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		Total.	Rate per 1,000.	Rate per 1,000 in 1882.
		M	F	M	F	M	F	M	F	M	F			
Sunderland East.....	9,696	30	30	29	24	25	33	32	23	116	110	226	23·3	33·1
Sunderland West	6,243	28	20	27	19	23	22	21	13	99	74	173	27·5	37·9
Bishopwearmouth North	37,406	157	126	109	106	123	118	112	95	501	445	946	25·2	25·2
Bishopwearmouth South	40,585	134	124	90	95	199	154	94	95	517	468	985	24·2	23·2
Monkwearmouth	27,187	85	108	82	82	75	61	66	73	308	323	631	23·2	27·7
Whole Borough	121,117	434	408	337	326	445	388	325	298	1541	1420	2961	24·4	26·4
TOTALS	121,117	842.		663.		833.		623.		2961.		2961	24·4	26·4

TABLE VII.

Occupation of Persons, 20 Years of Age and upwards, who died from the undermentioned Diseases during 1883.

(Given as accurately as the Returns allowed.)

Occupation.	Smallpox.	Typhoid Fever.	Typhus Fever.	Heart Disease.	Phthisis.	Diseases of Lungs.	Apoplexy.	Paralysis.	Cancer.	Totals.
Anchorsmith	..	..	..	..	1	..	..	..	..	1
Agent	..	..	..	..	1	..	..	..	..	1
Barmen	1	1	..	..	2	..	1	..	..	5
Baker	..	..	..	..	..	..	..	1	..	1
Bill Poster	..	..	..	..	..	1	..	..	..	1
Blacksmiths	..	..	1	..	3	7	2	2	1	16
Boilermakers	..	..	1	4	..	1	..	1	..	7
Bottlemakers	..	..	..	..	4	..	1	1	..	6
Boatbuilders	..	..	..	1	..	1	..	..	..	2
Brass Moulder	..	..	..	..	..	1	..	..	..	1
Bricklayers	..	..	..	1	1	..	..	..	..	2
Brickmaker	..	..	..	..	..	1	..	..	..	1
Butchers	..	..	..	3	..	3	..	..	..	6
Builder	..	..	..	..	1	..	..	..	..	1
Cabinetmakers	..	..	..	..	1	2	1	..	..	4
Candlemaker	..	..	..	..	..	1	..	..	..	1
Cab Driver	..	..	..	1	..	..	..	..	..	1
Cartmen	..	.	..	3	..	2	..	..	1	6
Cartwright	..	1	..	..	..	..	..	..	..	1
Cattle Salesman	..	..	..	..	..	1	..	..	..	1
Cellarman	1	..	..	..	..	..	..	..	..	1
Chainmakers	..	..	..	1	1	..	..	..	..	2
Chemists	1	..	..	..	..	..	1	..	..	2
Chimney Sweep	..	..	..	..	1	..	..	..	..	1
Clerks	..	..	..	1	7	1	1	..	..	10
Collector	..	..	..	1	..	..	..	..	..	1
Coach Painter	..	..	..	..	1	..	..	..	..	1
Coal Fitter	..	..	..	1	..	..	..	..	..	1
Coachbuilder	..	..	..	1	..	..	..	..	..	1
Cork Cutter	1	..	..	..	..	..	..	..	..	1
Contractor	..	..	..	..	..	1	..	..	..	1
Dairyman	..	..	..	..	..	1	..	..	..	1
Dentist	..	1	..	..	..	..	..	..	..	1
Drillers	..	..	..	1	2	1	..	..	..	4
Draper	..	..	..	..	..	..	..	1	..	1
Driver	..	..	..	..	1	..	..	..	..	1
Drayman	..	..	..	..	..	1	..	..	..	1
Engineers	..	..	..	..	1	1	..	..	..	2
Engineman	..	..	..	..	..	1	..	..	..	1
Engine Drivers	..	..	..	1	..	..	..	1	..	2
Farmer	..	..	..	..	..	1	..	..	..	1
Fireman	..	..	..	1	..	..	..	..	..	1
Fish Curer	..	..	..	..	..	1	..	..	..	1
Carried forward	4	3	2	21	28	30	7	7	2	104

TABLE VII—CONTINUED.

Occupation.	Smallpox.	Typhoid Fever.	Typhus Fever.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Totals.
Brought forward ..	4	3	2	21	28	30	7	7	2	104
Fitters	1	..	..	..	4	..	..	..	..	5
Fishmongers	..	..	..	..	..	..	..	2	..	2
Flax Dresser	..	..	..	..	..	1	..	..	..	1
Foreman	..	..	..	..	..	1	..	..	..	1
Gardeners	..	..	..	1	..	2	..	..	..	3
Gatekeepers	..	..	..	1	..	..	1	..	..	2
Galvanizer	..	..	1	..	..	..	..	..	..	1
Gentlemen	..	..	..	1	..	..	1	..	..	2
Glassmakers	..	..	..	1	1	3	1	..	..	6
Grocers	..	..	..	1	1	1	..	..	1	4
Hatters	..	..	..	1	..	1	..	..	..	2
Hawkers	..	..	..	..	1	1	..	..	..	2
Herbgatherer	..	..	..	1	..	..	..	..	..	1
Hosier	..	..	..	..	..	.	..	..	1	1
Holderup	..	..	..	..	1	..	..	..	..	1
House Proprietor	..	..	..	1	..	..	..	..	..	1
Horseshoer	..	..	..	1	..	..	..	..	..	1
Innkeepers	..	..	..	..	..	2	1	..	1	4
Iron Founder	..	..	..	..	..	..	..	1	..	1
Joiners	2	..	..	3	2	1	..	1	..	9
Labourers	5	1	5	16	13	34	6	..	2	82
Lampkeeper	..	..	.	..	..	1	..	..	..	1
Master Mariners	..	..	..	2	3	6	1	..	..	12
Masons	..	..	..	..	..	1	..	1	..	2
Miners	..	..	..	3	..	2	1	1	1	8
Miller	..	..	..	1	..	..	..	..	..	1
Moulders	..	..	..	2	..	1	..	..	..	3
Musician	..	..	..	..	1	..	..	..	..	1
No Occupation	1	..	..	1	2	1	1	..	..	6
Naval Officer	..	..	..	..	1	..	..	..	..	1
Painters	..	2	1	2	1	..	..	1	..	7
Pawnbroker	..	..	..	1	..	..	..	..	..	1
Pilots	..	..	..	..	1	1	1	..	..	3
Plumber	..	..	..	1	..	..	..	..	..	1
Plater	..	..	..	..	..	1	..	..	..	1
Platelayer	..	..	..	..	..	..	..	..	1	1
Potter	..	..	..	..	..	..	..	1	..	1
Porters	2	..	..	..	..	..	..	..	..	2
Policeman	..	..	..	..	.	1	..	..	..	1
Puddlers	..	..	..	..	1	1	..	..	..	2
Rivetters	..	3	1	..	..	2	..	..	..	6
Ropemakers	..	..	..	2	1	1	..	..	..	4
Saddler	..	..	..	..	..	1	..	..	..	1
Sailmaker	..	..	..	1	..	..	..	..	..	1
Seamen	..	1	2	7	3	18	..	4	3	38
Shipwrights	1	..	..	6	2	7	4	3	..	23
Shoemakers	..	..	1	..	1	1	1	2	2	8
Shipsmith	..	..	..	..	..	1	..	..	..	1
Shipowners	..	..	..	..	..	1	1	..	1	3
Soldiers	..	..	..	..	1	2	..	1	..	4
Carried forward ..	16	10	13	78	69	127	27	25	15	380

TABLE VII—CONTINUED.

Occupation.	Smallpox.	Typhoid Fever.	Typhus Fever.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Totals.
Carried forward ..	16	10	13	78	69	127	27	25	15	380
Solicitor	..	..	..	1	..	..	..	..	..	1
Stationers	..	..	..	1	1	..	..	..	..	2
Stocktaker	..	1	..	..	..	..	..	..	..	1
Stonemasons	..	..	..	..	2	1	..	..	..	3
Striker	..	..	..	..	1	..	..	..	..	1
Surgeon	..	..	..	..	1	..	..	..	..	1
Tailors	..	..	..	1	1	2	..	4	..	8
Tallow Chandler	..	..	..	..	1	..	..	..	..	1
Teazer	..		..	..	..	..	..	1	..	1
Timekeeper	..	..	..	..	..	1	..	..	..	1
Tinsmith	..	..	..	..	..	..	1	..	..	1
Trimmers	..	..	..	..	1	4	1	..	1	7
Tripe Preparer	..	..	..	..	..	1	..	..	..	1
Watermen	..	..	..	..	..	2	..	..	1	3
Watchman	..	..	..	..	..	1	..	..	..	1
Waiter	..	..	..	..	1	..	..	..	..	1
Warehouseman	..	..	..	..	..	1	..	..	..	1
Weavers	..	..	..	1	..	1	1	..	..	3
Wood Carver	..	..	..	..	1	..	..	..	..	1
Totals	16	11	13	82	79	141	30	30	17	419
Females	6	5	13	80	98	110	29	25	32	398
Grand Totals	22	16	26	162	177	251	59	55	49	817

TABLE VIII.

TABLE OF STREETS

IN WHICH ZYMOTIC DISEASES OCCURRED IN THE YEAR 1883.

(Given as accurately as the Returns allowed.)

SUNDERLAND EAST.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Barrack street	4	..	..	..	..	..	..	..	..	1	1
Burleigh street.....	..	2	..	1	..	..	..	..	..	1	..
Bull open	..	1	..	..	..	..	..	..	..	..	1
Church street	3	..	..	..	..	..	..	..	..	3	..
Coast Guard houses.....	..	..	..	..	..	..	..	..	1	..	1
Dunn's passage	..	..	1	..	..	..	..	..	..	1	..
Fitters' row	..	..	..	..	1	..	..	..	..	..	..
High street East	4	..	..	1	1	1	..	..	..	1	2
Hartley street	1	..	..	..	..	..	..	..	..	1	..
John street (East).....	1	..	..	..	..	..	..	..	..	1	..
Maling's rigg	1	..	..	..	2	..	..	..	..	..	1
Minorca	1	..	1	..	..	..	..	..	..	1	1
Monkey's yard	..	3	.	..	..	..	..	..	..	..	2
Nesham square.....	2	..	..	..	..	..	..	2	1	..	2
North Moor street	1	..	..	..	..	..	..	.	..	..	1
Robinson's lane	..	1	..	..	..	..	..	..	..	..	1
Silver street	4	..	..	..	..	..	..	..	..	..	..
Stafford street	1	..	..	..	..	..	..	..	1	..	1
Vine street.....	2	2	..	..	..	..	..	..	..	2	2
Warren street	2	..	1	..	..	..	..	..	1	1	1
Totals	27	9	3	2	4	1	..	2	4	13	17

TABLES OF STREETS—Continued.

SUNDERLAND WEST.

Names of Street.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Bodlewell lane	..	..	..	..	..	..	1	..	..	..	1
Bank street	1	..	..	..	..	..	..	..	..	..	..
Covent Garden street	..	1	1	..	..	..	..	..	1	..	2
Cross street	..	1	..	..	..	..	..	..	..	..	..
Church street	3	..	..	..	..	..	..	..	1	..	1
Commissioners' quay	1	..	.	..	..	..	..	..	..	..	..
Flag lane	..	..	..	..	..	..	..	2	..	..	1
Fighting Cock lane.....	..	2	..	..	..	..	..	..	1	2	1
Golden alley	1	..	..	..	..	..	..	..	..	1	..
High street East	4	..	..	..	..	1	..	..	1	..	2
Low street.....	..	..	..	..	..	..	..	1	1	..	1
Low quay	5	..	.	..	..	..	..	1	..	4	2
Lombard street	..	..	..	..	..	..	..	..	1	..	1
Maud's lane	..	..	..	..	..	..	1	..	..	..	1
Mark quay.....	..	..	1	..	..	..	..	..	..	1	..
New Grey street	1	..	..	..	..	..	..	..	..	1	..
Pottery bank.....	1	..	..	..	..	..	.	..	..	..	..
Queen street	2	..	1	..	..	1	..	..	1	1	2
Spring Garden lane.....	..	..	15	..	..	..	1	..	1	15	2
Sans street.....	1	1	3	..	..	..	1	..	..	1	1
Spencely lane	..	..	..	..	..	1	..	..	..	..	..
Stone yard.....	1	..	..	..	..	..	..	..	..	..	..
Walton place	..	..	1	..	..	..	..	..	..	1	..
Totals	21	5	22	..	..	3	4	4	8	27	18

TABLES OF STREETS—Continued.

BISHOPWEARMOUTH NORTH.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Australia street	..	..	..		..	1	..	..	..	..	1
Alfred street	3	..	..	..	..	..	..	..	1	..	1
Ayre's Quay road	2	2	..	..	..	..	..	..	1	1	2
Ailesbury street	5	..	..	..	..	..	..	..	..	4	..
Alderson street	2	..	..	..	..	..	..	..	..	1	..
Anne street	1	..	..	..	..	..	..	..	1	1	1
Albert street	..	..	..	..	..	..	..	..	1	..	1
Aiskell street	..	..	..	..	..	..	..	..	1	..	1
Ancona street	..	..	..	..	..	..	..	..	1	..	1
Booth street	1	..	..	..	4	..	..	..	..	1	1
Bridge street	4	..	..	..	..	..	..	..	..	4	..
Bottle bank	1	2	..	..	..	..	..	..	..	3	1
Back Farrington row	2	..	..	..	.	..	..	..	..	2	..
Blue Bell yard	1	..	..	..	..	..	..	..	..	..	..
Buxton terrace	1	..	..	..	..	..	..	..	..	1	1
Charles street West	..	..	..	..	..	..	..	3	..	..	1
Church street West	..	1	..	..	..	..	..	..	..	1	..
Cromwell street	1	..	..	..	1	..	..	..	..	1	1
Chester terrace	6	1	..	..	..	..	..	2	..	6	3
Cumberland street	5	..	..	..	..	..	..	..	..	3	..
Clanny street	1	1	..	..	..	..	2	..	..	1	2
Cross Farrington row	1	..	..	..	..	..	..	..	..	1	..
Crescent row	2	..	..	..	5	..	..	..	..	2	1
Catherine street West	..	..	..	..	3	..	..	..	..	..	..
Cross Green street	6	..	..	..	..	..	..	..	..	2	1
Cirencester street	1	..	..	..	..	..	..	..	..	1	..
Chester road	1	..	..	..	..	..	..	..	..	1	..
Castle street	2	..	..	..	1	..	..	..	..	2	..
Chester street	1	..	..	..	1	..	..	..	..	..	1
Collier row	..	..	..	..	..	..	..	..	1	..	1
Dene terrace	..	..	..	..	..	2	1	..	..	..	2
Dove street	2	..	..	..	..	..	..	..	..	2	..
Dunning street	7	..	..	..	3	..	..	..	..	4	2
Ditchburn terrace	1	..	..	..	..	..	..	..	..	..	..
Elgin street	..	..	..	..	3	..	..	..	..	..	1
East Cross street	2	1	..	..	1	..	..	..	..	2	2
Enderby road	2	..	..	..	..	..	..	..	..	1	..
Eden street West	1	..	..	..	..	..	..	..	..	1	..
Factory yard	10	..	..	..	..	..	..	..	..	3	..
Farrington row	1	..	..	..	1	..	..	..	1	1	1
Frederick terrace	1	..	..	..	..	..	..	..	..	1	..
Gill Bridge avenue	5	1	1	..	..	..	..	..	..	4	2
Glass street	2	..	..	..	..	..	..	..	..	1	..
Carried forward ..	82	9	1	..	23	3	3	5	8	59	32

TABLES OF STREETS—Continued.

BISHOPWEARMOUTH NORTH—Continued.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Brought forward ..	82	9	1	..	23	3	3	5	8	59	32
Gill road	8	..	..	..	..	..	..	..	..	5	1
Granville street	1	..	..	..	..	..	..	..	..	..	..
Glebe street	1	..	..	..	..	..	..	..	..	1	..
Glebe Cleft villas.....	1	..	..	..	..	..	..	..	..	1	..
Garden street	2	..	..	..	..	..	..	..	..	..	..
Green street	1	..	..	..	..	..	..	..	..	1	1
Gilsland street South	1	..	..	..	..	..	..	.	..	..	..
Hope street	4	1	..	..	..	..	..	..	1	3	1
Hedley street	2	..	..	..	..	..	..	1	..	1	1
Hetton street	..	..	1	..	..	..	..	..	..	1	..
Hopper street	1	1	2	..	..	..	..	..	..	1	1
High street West.....	2	..	..	..	..	..	..	..	..	1	..
Hylton street	2	..	..	..	..	..	..	..	..	..	..
Johnson street	11	1	..	..	1	1	..	..	1	6	4
John street West.....	3	..	..	..	..	..	.	..	..	1	..
Kirtley's buildings	..	..	..	..	2	..	..	..	..	..	..
King's place	1	..	..	..	..	..	..	..	..	1	..
Lisburne terrace	..	1	2	..	..	.	..	..	..	3	..
Lambton street.....	1	..	..	..	1	..	..	..	..	1	..
Lumley street	1	..	..	..	..	..	..	..	.	..	..
Milburn street	2	..	..	..	..	..	..	..	..	1	..
Matlock street	2	..	..	..	..	..	..	..	..	2	..
Maple street	3	..	..	..	..	..	..	..	..	..	..
Marlborough street	3	..	..	..	..	..	..	..	..	..	..
Margaret street.....	..	..	..	..	..	..	..	..	1	..	1
Number's garth	..	..	..	1	..	..	..	..	1	1	1
Napier street.....	..	..	..	..	1	..	..	..	..	..	..
North Milburn street	1	..	..	..	..	..	..	..	..	1	..
Old Garrison	1	..	..	..	..	..	1	..	..	..	1
Ogden street.....	..	..	..	..	..	..	..	..	1	..	1
Picton street.....	..	..	..	..	..	..	1	..	..	..	1
Potts street	4	..	..	..	..	8	1	..	..	3	2
Palmer street	..	..	..	..	1	..	..	..	..	..	1
Picard street	1	..	..	..	..	..	..	..	..	1	..
Panns	8	..	..	..	..	..	..	..	..	7	..
Pensher street	4	..	..	..	2	..	..	..	..	1	2
Peacock street West	..	..	..	..	2	..	..	..	1	..	1
Queen street	6	1	..	..	..	..	..	..	1	4	2
Rosanna street	1	..	..	..	1	..	..	..	..	1	..
Rutland street	..	7	..	..	..	..	1	..	..	1	1
Ravensworth street	..	..	..	..	..	..	..	..	1	..	1
Simpson street	..	..	..	..	1	..	..	..	..	..	..
Carried forward ..	163	21	6	1	35	12	7	6	16	109	56

TABLES OF STREETS—Continued.

BISHOPWEARMOUTH NORTH—Continued.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Brought forward .	163	21	6	1	35	12	7	6	16	109	56
Summerhill East	..	..	..	..	1	..	..	..	..	..	..
Sunderland street	1	..	..	..	..	..	..	..	..	..	..
St. Mark's cottages	1	..	1	..	..	..	..	..	..	..	1
Stanley street	3	..	..	..	..	..	..	..	..	3	..
St. Mark's street	1	..	..	..	..	..	..	..	..	1	..
Stanhope street.....	2	..	..	..	..	..	..	..	..	2	..
Swinbank street	1	..	..	..	..	..	..	..	1	..	1
Spark terrace.....	..	..	..	..	..	..	..	..	1	..	1
Trimdon street.....	3	1	..	..	..	1	..	..	..	2	..
Thornton place.....	1	..	..	..	..	..	..	..	..	1	..
Vicarage terrace	1	..	..	..	..	..	..	..	..	1	..
Wellington lane	1	2	..	..	..	..	..	..	..	3	..
Williams street West	2	1	..	..	..	..	..	2	1	2	2
Woodbine terrace.....	4	..	..	..	..	..	..	..	..	3	1
William street	1	..	..	..	..	..	..	..	..	1	..
West Wear street	1	..	..	..	..	..	..	..	..	1	..
Wellington road	1	..	..	..	..	..	..	..	..	..	..
Water street.....	1	..	..	..	..	..	..	..	..	1	..
Wharncliffe street	1	..	..	..	..	..	..	..	..	..	..
Washington street	1	..	..	..	..	..	..	..	..	..	..
Waterworks road.....	1	..	..	..	..	..	..	..	..	..	..
Totals	191	25	7	1	36	13	7	8	19	130	62

TABLES OF STREETS—Continued.

BISHOPWEARMOUTH SOUTH.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Albany terrace	..	..	3	..	..	..	..	..	..	3	..
Addison street	..	..	..	..	..	..	..	2	..	..	1
Albion place	2	..	..	..	..	..	..	..	..	1	..
Aubrey terrace	2	..	..	..	..	..	.	..	..	1	..
Amberley street	1	..	..	..	..	..	..	..	1	..	1
Ann street	..	..	1	..	..	..	..	..	..	..	1
Brougham street	5	..	..	..	..	..	..	1	1	2	2
Bramwell street	6	..	..	..	1	..	..	1	..	5	2
Blue House grange	5	..	..	..	1	..	..	..	..	6	..
Burlington road	..	1	..	..	1	..	..	..	1	..	3
Back Low row	..	1	..	..	..	..	..	..	..	..	..
Blandford street	2	..	..	..	..	..	..	..	..	..	..
Belle Vue road	..	1	..	..	..	..	..	..	..	1	..
Bishopton street	..	..	..	..	1	..	..	..	..	..	1
Belle Vue crescent	..	..	..	..	..	..	1	..	..	..	1
Commercial road	..	..	..	..	3	..	..	..	..	.	..
Christopher street	..	..	..	..	..	..	1	..	..	..	1
Crow street	..	..	..	..	2	..	..	..	..	..	1
Crowtree road	..	..	..	..	2	..	..	..	..	..	..
Cousin street	1	1	..	..	..	..	..	..	..	..	1
Coronation street	5	..	..	..	..	..	1	..	.	4	1
Crowtree terrace	2	..	..	..	..	..	.	..	..	2	..
Cairo street	1	..	..	..	..	..	..	..	..	..	..
Clementina street	..	..	..	..	1	..	..	..	..	.	1
Carter street	..	..	..	..	..	..	..	..	1	..	1
Derby street	..	..	..	..	1	..	..	..	..	..	..
D'Arcy terrace	1	..	..	..	..	..	..	..	..	..	..
Elmwood street	..	..	..	..	1	..	..	..	..	1	..
East street	..	..	..	..	1	..	..	..	1	..	2
Fleet street	2	..	1	..	..	..	2	..	..	..	1
Fowler terrace	1	..	..	..	..	..	..	..	..	1	..
Fawcett street	..	..	..	..	1	..	..	..	..	1	..
Grace terrace	1	..	..	..	..	..	..	..	..	..	..
Garrick street	..	1	..	..	..	..	..	..	..	..	1
Harrogate street	..	..	..	..	..	..	2	..	..	..	..
Havelock terrace	..	..	..	..	1	..	..	..	..	..	..
Hendon street	..	..	..	..	1	..	..	..	..	..	..
High street West	4	..	..	..	1	..	..	..	..	1	..
Hudson's buildings	..	..	..	..	1	..	..	..	..	..	1
Henry street	1	..	..	..	..	..	..	..	..	..	..
Howick street	..	..	..	..	..	..	2	..	..	..	1
Herrington street	1	1	..	..	..	..	1	1	..	1	2
Hendon road	..	..	..	..	1	..	..	..	..	..	1
Carried forward ..	43	6	5	..	21	..	10	5	5	30	27

TABLES OF STREETS—Continued.

BISHOPWEARMOUTH SOUTH—Continued.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Brought forward ..	43	6	5	..	21	..	10	5	5	30	27
Infirmary	..	..	1	..	1	..	..	..	1	2	1
International road	..	..	..	..	..	..	..	..	1	..	1
John street	1	..	..	1	..	..	..	..	..	1	1
King street	1	1	..	..	1	..	..	..	1	1	2
Lawrence street	..	..	..	..	..	..	..	..	1	..	1
Moor street	1	..	1	..	..	..	..	..	..	2	..
Mordey street	..	..	..	..	..	1	..	..	..	..	1
Nile street.....	2	1	..	..	1	..	..	..	1	3	1
Nicholson street	5	..	..	..	2	..	..	..	..	1	..
New Union street	..	..	..	..	1	..	..	..	..	1	..
Norfolk street	1	..	..	..	..	..	..	..	..	1	1
North Durham street	1	..	..	..	..	..	..	..	1	1	1
Northumberland street ..	..	..	..	..	..	..	1	..	..	..	1
Old Mill road	1	..	..	..	1	..	..	..	..	..	1
Oak street	..	..	..	..	..	..	..	..	1	..	1
Page street	..	3	1	..	..	..	..	..	..	..	2
Parade	3	..	..	..	..	..	..	..	..	..	..
Reynoldson street	1	..	..	..	..	..	..	..	..	..	1
Railway street	1	..	..	..	..	..	..	..	..	..	1
Randolph street	2	..	..	..	1	..	..	..	1	..	1
South Durham street	1	..	1	..	..	..	..	..	1	1	1
Salem street	..	..	..	..	1	..	..	..	..	..	..
Short street	2	..	..	..	..	..	..	..	..	..	..
St. Thomas street	2	..	..	..	..	..	..	..	..	2	..
St. Bede's terrace	..	..	..	..	..	..	..	1	1	..	2
Sussex street.....	..	..	..	..	..	..	..	..	1	1	1
South street	..	..	..	..	..	..	..	1	..	..	1
Tees street.....	..	4	..	..	..	..	..	..	..	2	1
Tunstall vale.....	2	..	..	..	..	..	..	..	..	1	..
Upper Sans street	1	..	..	..	..	..	1	..	..	1	1
Vane terrace.....	1	..	..	..	..	..	..	..	..	..	1
Villette mount	..	..	..	..	..	..	..	..	1	..	1
White House road	..	..	..	..	1	..	..	..	..	..	..
West street	2	1	..	..	..	..	..	..	1	2	2
Walton's buildings.....	1	..	..	..	..	..	..	..	..	1	..
Woodbine street	..	..	..	..	4	..	..	..	..	..	1
Wear street	..	..	1	..	1	..	..	..	1	..	2
Waterloo place.....	..	..	..	..	..	..	..	..	1	..	1
York street	..	1	..	..	..	..	..	..	..	..	1
Zion street.....	1	..	..	..	1	..	..	..	..	..	1
Totals	76	17	10	1	37	1	12	7	20	54	62

TABLES OF STREETS—Continued.

MONKWEARMOUTH.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Albany street	..	1	1	..	..	..	..	..	..	1	1
Bloomfield street	..	..	1	..	..	..	..	..	..	1	..
Back North Bridge street	..	..	..	..	..	..	..	1	..	..	..
Back Dundas street	..	..	..	..	3	..	..	..	..	..	..
Brooke street	..	..	..	..	2	..	..	..	..	..	1
Barclay street	..	..	..	..	2	..	..	..	..	..	..
Bright street	1	..	..	..	..	..	..	..	..	..	..
Bond street	1	..	..	..	..	..	..	..	1	1	1
Back Waterloo street	2	..	..	..	..	..	..	..	..	..	..
Brewery bank	1	..	..	..	..	..	..	..	..	1	..
Brandling street	..	.	..	..	..	..	..	..	2	..	2
Barrington street	..	..	..	..	..	..	..	..	1	..	1
Bonner's field	..	..	..	..	2	..	..	..	..	..	2
Church street	3	1	..	1	..	..	..	..	1	3	3
Charles street	..	..	..	..	..	..	..	1	..	..	1
Colliery square	1	1	1	..	1	..	..	..	1	1	2
Chilton street	1	..	..	..	..	..	..	..	..	..	..
Cage hill	..	..	..	..	..	..	..	..	1	..	1
Dame Dorthy street	..	1	..	..	5	7	..	..	1	..	5
Dock street	3	..	1	..	..	2	..	..	1	1	3
Duke street	..	..	..	..	..	1	..	..	..	..	1
Dundas street	1	..	..	..	4	..	..	..	..	..	1
Dixon's square	..	3	..	..	..	..	..	..	1	..	2
Devonshire street	1	..	..	..	..	..	..	..	..	1	..
Elizabeth street	..	..	.	..	..	1	..	..	..	..	1
Eglinton street	3	..	..	..	..	..	..	..	2	2	2
Ellerslie terrace	..	1	..	..	..	..	..	..	..	1	..
Fulwell road	..	..	..	..	..	..	..	..	1	..	1
Finsbury street	..	1	..	..	..	..	..	..	..	..	1
Gosforth street	..	..	1	..	1	1	..	..	..	1	..
Gladstone street	4	..	..	..	..	..	..	..	1	3	1
Hamilton street	..	..	..	..	4	..	..	..	1	..	1
Huddleston street	1	..	..	..	2	1	..	..	.	..	3
Howick place	6	..	..	..	..	..	..	..	..	6	2
Hedworth place	..	1	6	..	..	..	..	..	1	2	1
Hedworth street	1	..	..	..	..	..	..	2	1	1	2
Horatio street	2	1	..	..	2	..	..	..	1	1	3
Hodgson's buildings	..	..	..	..	3	..	..	..	..	..	1
Hardwicke street	..	..	..	2	..	..	..	..	..	1	..
Howick place, Back	1	..	..	..	..	..	..	..	..	1	..
Hallgarth square	2	..	..	..	..	..	..	..	..	1	..
Look-out hill	1	..	..	..	..	1	..	..	..	..	1
Long row	..	..	..	..	..	..	..	..	1	..	1
Carried forward ..	36	11	11	3	31	14	..	4	19	30	48

TABLES OF STREETS—Continued.

MONKWEARMOUTH—Continued.

Names of Streets.	Smallpox.	Typhoid Fever.	Typhus Fever.	Continued Fever.	Scarlet Fever.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Brought forward ..	36	11	11	3	31	14	..	4	19	30	48
Mulgrave street	..	..	..	..	..	..	..	2	1	..	2
Normanby street	2	2	2	..	..	..	..	..	..	4	1
New Brandling street....	1	..	..	..	..	..	..	..	..	1	..
North Bridge street.....	1	..	..	..	..	..	..	..	..	1	..
Osborne street	1	..	..	..	..	..	..	..	1	1	1
Pilgrim street	1	..	..	..	..	..	..	..	..	1	..
Portobello lane.....	..	..	..	..	..	..	..	1	..	..	1
Roker avenue	1	..	..	..	2	..	..	..	3	1	4
Rendlesham street	1	..	..	..	..	..	..	..	1	..	1
Rothsay street	3	..	..	..	..	..	..	..	..	3	..
Richmond street	..	..	..	..	..	..	..	1	..	..	1
Stansfield street	..	..	..	..	2	..	..	..	..	..	1
St. George's terrace.....	..	..	..	..	2	..	..	..	..	..	..
Society lane	..	..	..	..	1	1	..	..	..	..	2
Southwick lane.....	2	3	..	..	..	..	..	..	..	5	..
Thomas street	..	..	1	..	..	..	..	..	..	1	..
Topliffe row	1	..	..	..	..	1	..	..	..	1	1
Trafalgar court.....	1	..	..	..	..	..	..	..	..	1	..
Victor street	6	..	..	..	1	..	1	..	..	1	2
Wayman street.....	1	..	5	..	..	..	..	..	..	1	2
Whickham street.....	..	..	1	..	..	..	..	..	..	..	..
Williamson street.....	..	..	1	..	..	2	..	..	..	..	2
Wilson street, North	..	2	..	..	..	..	..	..	2	..	3
Wearmouth street	..	..	..	..	2	..	..	..	..	..	..
Whitburn street	1	..	..	..	..	..	..	..	2	..	2
Williamson terrace	..	..	..	..	2	..	..	..	..	..	1
Yorke street	1	..	..	..	..	..	..	..	..	1	..
Zetland street	..	..	..	..	1	..	..	..	1	..	1
Totals	60	18	21	3	44	18	1	8	30	53	76

TABLE OF BIRTHS

REGISTERED IN THE BOROUGH FOR THE YEAR ENDING DECEMBER 29TH, 1883.

DISTRICTS.	Populations.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		Total.	Rate per 1,000.	Rate per 1,000 in 1882.
		M	F	M	F	M	F	M	F	M	F			
Sunderland East	9,696	46	50	36	49	44	48	49	60	175	207	382	39·3	37·1
Sunderland West	6,243	31	24	33	27	27	45	36	39	127	135	262	41·9	39·5
Bishopwearmouth North	37,406	185	197	221	209	203	204	199	165	808	775	1,583	42·3	43·0
Bishopwearmouth South	40,585	197	224	201	194	232	173	181	203	811	794	1,605	39·5	38·4
Monkwearmouth	27,187	158	154	153	154	154	158	157	134	622	600	1,222	44·9	43·9
Whole Borough	121,117	617	649	644	633	660	628	622	601	2543	2511	5,054	41·7	41·0
Totals	121,117	1,266.		1,277.		1,288.		1,223.		5,054.		5,054	41·7	41·0

TABLE X.

Statement of Vaccination in the entire Districts of the Sunderland Union,

YEAR ENDING DECEMBER, 1883,

(AS FURNISHED BY MR. J. THOMPSON, VACCINATION OFFICER).

Registration Districts.	Births Registered.	Vaccinated by Public Vacinator.	Vaccinated by Private Medical Practitioners	Total Vaccinated.	Postponed by Medical Authority.	Died previous to Vaccination	Removals into other Unions.	In Abeyance.
Sunderland East.....	381	161	176	337	3	32	9	..
Sunderland West	261	143-1*	77	220	..	33	7	..
Bishopwearmouth North	2009	726-2*	1025	1751	78	168	50	..
Bishopwearmouth South	1723	1028-10*	454	1182	34	128	67	2
Monkwearmouth	1732	854-2*	632	1486	19	165	58	2
Totals	6106	2912-15*	2354	5275	94	526	191	4

* Denotes insusceptible cases.

TABLE XI.

The DEATH-RATES,

Together with the Deaths in Sunderland from 1810 to the present time, are given below—

Years.	Deaths.		Death-rate.
1810	400		32·5
1821	408		27·7
1831	479		28·0
1841	1,512		26·8
1846	1,774		31·6
1851	1,795	equal to an average rate of..	26·0
1852	1,919		
1853	2,069		
1854	2,209		
1855	1,909		
1856	2,130		
1857	2,146		
1858	2,040		
1859	2,040		
1860	1,820		
1861	1,879		20·4
1862	2,152		23·0
1863	2,818		29·3
1864	2,264		24·1
1865	2,396		23·3
1866	2,556		28·4
1867	2,145		23·4
1868	2,481		26·6
1869	2,135		22·5
1870	2,026		20·9
1871	3,966		36·4
1872	2,702		26·9
1873	2,341		22·9
1874	2,455		23·4
1875	2,385		22·5
1876	2,262		21·6
1877	2,487		22·7
1878	2,864		25·8
1879	2,507		22·2
1880	2,901		25·2
1881	2,436		20·8
1882	3,146		26·4
1883	2,961		24·4

TABLE XII.

Cases in which Premises were visited by the Medical Officer of Health and Sanitary Inspectors, on account of Infectious Diseases prevailing therein.

Diseases.	No. of Cases.	Bedding and Articles of Clothing Burned to prevent Contagion.	No.
Smallpox	379	Mattresses	47
Typhus Fever	53	Chaff Beds	2
Enteric ,,	71	Feather ,,	1
Simple Continued Fever	10	Flock ,,	18
Scarlet Fever	121	Rugs	13
Measles	34	Sheets	13
Diphtheria	20	Blankets	6
Whooping Cough	22	Pillows	34
Diarrhœa	127	Bolsters	8
		Trousers	6
		Jackets	6
		Sundries	96
Total	837	Total	250

TABLE XIII.

List of Cases in which it was found necessary to adopt Magisterial proceedings.

Particulars of Complaint.	No. of Cases.	How Disposed of.	Penalties Imposed. £	s.	d.
Borough Bye-Laws	1	Fined 2/6 and costs	0	2	6
Ash-pits, Privies, Water-closets, Spouts, and Premises in such a state as to be a nuisance and Injurious to Heath	43	40 withdrawn on payment of costs, and 3 ordered to abate the Nuisance	—		
Exposing Unsound Food for Sale	3	2 fined 5/- and costs; 1 fined 10/- ,,	1	0	0
Adulteration of Food	3	3 fined 10/- and costs	1	10	0
Common Lodging House Bye-Laws	10	5 fined 15/- including costs; 2 to pay costs: 2 fined 5/- and costs; 1 fined 2/6 ,,	4	7	6
Slaughter House Bye-Laws	3	3 fined 5/- and costs	0	15	0
Exposing Person while suffering from Infectious Disease	1	Fined 40/- and costs	2	0	0
Exposing Infectious Clothing at the Public Wash-House	1	Fined 10/- and costs	0	10	0
Total	65	Total £	10	5	0

TABLE XIV.

Number of Persons summoned under the Sanitary Acts.

Sanitary Acts.	Number of Persons.	Convicted.	Ordered to Abate.	To pay costs.	Summons withdrawn on payment of costs.
Public Health Act....	45	2	3	..	40
Selling and Exposing for Sale Unsound Food	3	3	..	..	..
Adulteration of Food..	3	3	..	..	..
Bye-Laws	4	4	..	..	..
Common Lodging House Act.....	10	8	..	2	..
Total	65	20	3	2	40

TABLE XV.

Table showing the amount of Bad Meat and other unwholesome Articles of Food seized and destroyed during 1883.

Class of Food Seized.	No. of Seizures.	Weight in Pounds Seized and Destroyed.	No. of Persons Summoned.	No. of Convictions.	Amount of Penalties imposed.
Beef and Mutton	3	1,288 lbs.	..	..	..
Whitings	2	80 lbs.	2	2	10/-
Preserved Mutton	1	36 tins	..	..	..
,, Lobster	1	96 tins	..	..	..
Pork and Ham	4	526 lbs.	..	..	..
Pears.....	1	15 baskets	..	..	..
Plums	1	20 quarts	1	1	10/-
Totals	13	..	3	3	20/- & costs

TABLE XVI.

Notices Served.

To Repair Defective House Drains, Roofs, Water-closets, Ash-pits, &c.	1,825
To Whitewash Premises, Cleanse Rooms, Yards, Out-Houses, &c	2,077
Defective Spouts	140
To abate overcrowding	19
To abate Smoke Nuisances	2
To Cleanse and Disinfect Houses wherein Zymotic Diseases had occurred	460
Total	4,523

TABLE XVII.

Nuisances reported and Notices served by Sanitary Inspectors during the Year 1883.

Number of Nuisances reported	2,316
Nuisances abated without formal notice	250
Nuisance abated after notice without proceedings	2,001
Nuisances abated after proceedings had been taken	65
Number of formal notices given	4,523
Complaints made at Office, and attended to by Inspectors	436
Order of Magistrates to abate Nuisance	3

TABLE XVIII.

Disinfection of Bedding, Clothing, and Houses.

Articles Disinfected.	No.	Houses Fumigated and Disinfected.	No.
Feather Beds	117	Houses Fumigated and Disinfected by Inspector	576
Mattresses	165		
Blankets	85		
Pillows	310		
Sheets	82		
Quilts	140		
Flock Beds	6		
Curtains	27		
Shawls	29		
Suits	85		
Carpets	16		
Sundries	580		
Total	1,642	Total	576

TABLE XIX.

Ash-pits Cleansed by Corporation.

Orders taken at the Office	8,700	No. of Ashpits Cleansed	47,607
		No. of Loads removed during 1883	55,624
		Ash-closets and Scuttles	10,564
Total Orders	8,700	Total Loads	66,188

TABLE XX.

TABLE OF METEOROLOGICAL OBSERVATIONS

From January to March, 1883.

JANUARY.						FEBRUARY.						MARCH.					
Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.
1	29·65	55·0	40·0	SW	·13	1	29·55	39·0	32·0	SSW	·66	1	30·61	50·0	38·5	N	·00
2	29·45	51·0	42·0	SSW	·02	2	29·03	45·0	33.0	SSE	·02	2	30·71	42·0	35·5	W	·00
3	29·98	49·0	42·0	NW	·00	3	29·46	45·0	38·0	WSW	·00	3	30·75	53·0	36·0	SW	.00
4	30·24	48·0	41·0	SSW	·00	4	29·92	51·0	39·0	W	·00	4	30·68	51·0	36·0	NW	·00
5	30·15	48·0	41·0	SSW	·15	5	30·18	47·0	41·0	SSW	·00	5	30·70	52·0	34·0	NNW	·01
6	30·45	52·0	42·0	WNW	·00	6	30·15	44·0	37·0	S	·00	6	30·31	39·0	32·0	NNE	·30*
7	30·50	46·0	38·0	W	·00	7	29·85	42·0	35·0	SSE	·23	7	30·15	39·0	31·0	N	·37*
8	30·37	47·0	33·0	SW	·00	8	29·70	44·0	35·0	SSE	·13	8	30·00	40·0	29·0	NNE	·04
9	30·12	45·0	37·0	SE	·00	9	29·71	52·0	35·0	WNW	·04	9	31·16	43·0	28·0	ENE	·00
10	29·82	48·0	41·0	SE	·02	10	29·35	52·0	38·0	WSW	·15	10	29·98	41·0	29·0	WSW	·13*
11	29·75	49·0	42·0	SSE	·00	11	29·30	50·0	39·0	WSW	·04	11	29·80	40·0	30·0	N	·12*
12	29·72	48 0	43·0	SSE	13	12	29·31	48·0	33·0	S	·24	12	29·90	39·0	28·0	N	·00
13	29·52	45·0	41·0	SSE	·00	13	29·65	49·0	35·0	WSW	·03	13	29·96	39·0	27·0	NNW	·15*
14	29·60	50·0	40·0	S	·23	14	29·65	50·0	35·0	S	·01	14	29·81	41·0	28·0	NNW	·06*
15	29·32	53·0	39·0	SSW	·00	15	29·83	52·0	37·0	SSW	·00	15	29·77	40·0	26·0	WNW	·05*
16	29·70	56·0	37·0	SW	·00	16	30·43	53·0	34·0	WSW	·00	16	29·44	40·0	29·0	WNW	·02*
17	29·94	52·0	39·0	SSW	·07	17	30·28	46·0	34·0	SSW	·05	17	29·32	40·0	25·0	WNW	·00
18	29·97	59·0	43·0	SW	·00	18	29·95	48·0	37·0	SW	·06	18	29·55	42·0	35·0	W	·02
19	30·47	51·0	40·0	S	·04	19	30·18	49·0	36·0	NNW	·02	19	29·92	40·0	36·0	WNW	·38
20	30·17	54·0	40·0	W	·00	20	30·05	56·0	37·0	WSW	·01	20	29·93	39·0	35·5	ESE	·00
21	30·42	49·0	43·0	NW	·01	21	30·22	59·0	45·0	WSW	·04	21	29·95	39·0	33·0	E	·01*
22	30·56	47·0	41·0	SW	·00	22	30·28	50·0	46·0	WNW	·00	22	30·45	35·0	33·0	E	·00
23	30·68	51·0	37·0	SSW	·00	23	30·72	55·0	39·0	WNW	·00	23	30·45	41·0	30·0	SW	·00
24	30·00	50·0	33·0	SSW	·16	24	30·52	55·0	39·0	W	·00	24	29·87	42·0	36·0	NW	·00
25	29·50	37·0	35·0	WNW	·32	25	30·67	51·0	39·0	WNW	·00	25	29·70	35·0	28·0	WNW	·04*
26	28·66	43·0	36·0	WNW	·01	26	30 58	50·0	33·0	W	·00	26	29·20	38·0	29·0	NNW	·10
27	29 35	41·0	32·0	WSW	·07	27	30·35	52·0	38·0	W	·02	27	29·60	40·0	27·0	NNW	·02
28	29·80	57·0	38·0	SW	·02	28	30·60	50·0	35·0	WNW	·17	28	30·07	37·0	26·0	WNW	·00
29	29·25	50·0	40·0	W	·03							29	29·98	43·0	28·5	SSW	·05
30	29·35	43·0	30·0	W	·00							30	29·22	49·0	34·0	SSW	·01
31	29·60	42·0	31·0	WNW	·00							31	29·82	49·0	35·0	WSW	·00
Mean Height of Barometer in Month, 29·87						Mean Height of Barometer in Month, 29·98.						Mean Height of Barometer in Month, 30·02.					
Adopted Mean Temperature 42·1						Adopted Mean Temperature 44·9.						Adopted Mean Temperature 39·8.					
Rainfall, 1·41 in.						Rainfall, 1·92 in.						Rainfall, 1·88 in.					

*Snow.

TABLE XX—Continued.

TABLE OF METEOROLOGICAL OBSERVATIONS.

From April to June, 1883.

APRIL.						MAY.						JUNE.					
Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.
1	30·30	50·0	38·0	SSW	·00	1	30·05	48·0	38·0	NNE	·02	1	30·07	62·0	50·0	S	·02
2	30·08	53·0	39·0	SSW	·00	2	30·05	52·0	38·0	NNE	·04	2	30·17	66·0	47·0	SSE	·00
3	30·30	51·0	44·0	NNE	·00	3	29·95	52·0	36·0	NNE	·10	3	30·42	67·0	45·0	SSE	·00
4	30·25	56·0	33·0	SW	·00	4	30·02	55·0	35·0	NNE	·00	4	30·22	60·0	43·0	ESE	·00
5	30·26	56·0	36·0	SW	·05	5	30·10	54·0	36·0	ENE	·00	5	30·20	54·0	46·0	ENE	·00
6	30·70	55·0	38·0	ENE	·00	6	30·17	60·0	39·0	NNE	·00	6	30·02	53·0	45·0	ENE	·00
7	30·72	59·0	39·0	SSE	·00	7	29·95	54·0	40·0	ENE	·44	7	29·90	53·0	46·0	ENE	·00
8	30·62	59·0	38·0	WNW	·00	8	29·75	43·0	38·0	NNE	·32	8	29·85	63·0	41·0	WSW	·11
9	30·47	53·0	39·0	NNW	·00	9	29·65	44·0	36·0	NE	·30	9	29·95	66·0	48·0	W	·07
10	30·52	47·5	36·0	N	·00	10	29·62	56·0	36·0	NNE	·31	10	30·10	60·0	45·0	NNE	·00
11	30·40	52·0	39·0	NNE	·00	11	29·74	50·0	36·0	WNW	·02	11	30·30	58·0	46·0	ENE	·03
12	30·30	50·0	38·0	ESE	·00	12	29·65	52·0	37·0	SSE	·01	12	30·32	64·0	50·0	WNW	·01
13	29·87	52·0	41·0	WSW	·00	13	29·80	60·0	39·0	SSE	·00	13	30·42	69·0	56·0	WNW	·03
14	29·90	52·0	42·0	NNW	·00	14	29·90	70·0	41·0	SSW	·00	14	30·35	67·0	53·0	NNW	·37
15	29·75	51·0	45·0	WSW	·00	15	30·17	66·0	48·0	SSW	·00	15	30·02	55·0	47·0	NNW	·10
16	29·87	53·0	38·5	WNW	·00	16	30·46	59·0	46·0	ESE	·00	16	29·85	52·0	49·0	N	·01
17	29·90	55·0	45·0	WSW	·00	17	30·45	70·0	40·0	WNW	·00	17	29·90	58·0	50·0	NNW	·02
18	29·50	60·0	42·0	SSW	·00	18	30·27	62·0	44·0	NW	·00	18	30·01	60·0	47·0	NNE	·00
19	29·70	52·0	43·0	NNE	·35	19	30·02	59·0	45·0	NNW	·00	19	29·97	61·0	46·0	WSW	·00
20	30·47	50·0	42·0	NNW	·05	20	30·10	55·0	45·0	NNE	·00	20	30·01	62·0	46·0	SSW	·00
21	30·50	51·0	40·0	ESE	·00	21	30·20	62·0	40·0	SE	·00	21	30·15	70·0	46·0	NNE	·00
22	30·50	53·0	38·0	ESE	·00	22	30·15	70·0	50·0	WSW	·00	22	30·00	71·0	45·0	SSW	·04
23	30·22	43·0	38·0	E	·12	23	30·12	65·0	46·0	WNW	·00	23	30·02	75·0	50·0	SSW	·0[illegible]
24	29·92	45·0	36·0	ESE	·11	24	30·06	72·0	51·0	WNW	·00	24	30·00	66·0	54·0	SSE	·18
25	29·60	60·0	37·0	WNW	·00	25	29·97	63·0	49·0	WSW	·02	25	29·95	69·0	53·0	ESE	1·08
26	29·80	58·0	36·0	SSE	.00	26	29·75	60·0	47·0	N	·00	26	29·62	60·0	41·0	SSW	·35
27	29·67	45.0	41·0	ESE	·18	27	30·00	69·0	49·0	WNW	·00	27	29·82	64·0	49·0	SW	·15
28	29·57	49·0	43·0	ESE	·49	28	29·95	62·0	50·0	SSW	·03	28	29·80	70·0	52·0	SW	·00
29	29·65	48·0	44·0	SSE	·00	29	29·95	64·0	51·0	WNW	·00	29	30·00	74·0	57·0	S	·12
30	29·85	48·0	42·0	ESE	·00	30	30·22	60·0	45·0	WNW	·00	30	30·10	76·0	51·0	SSE	·00
						31	30·25	66·0	43·0	SSW	·00						
Mean Height of Barometer in Month, 30·08.						Mean Height of Barometer in Month, 30·01.						Mean Height of Barometer in Month, 30·05.					
Adopted Mean Temperature 45·9						Adopted Mean Temperature 50·7.						Adopted Mean Temperature 63·5.					
Rainfall, 1·35 in.						Rainfall, 1·61 in.						Rainfall, 2·69 in.					

TABLE XX—Continued.

TABLE OF METEOROLOGICAL OBSERVATIONS

From July to September, 1883.

JULY.					AUGUST.						SEPTEMBER.					
Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.
30·12	72·0	52·0	SSE	·00	1	29·96	70·0	53·0	W	·00	1	29·55	69·0	50·0	WSW	·71
30·15	71·0	54·0	SSW	·51	2	30·20	70·0	55·0	NW	·15	2	28·95	68·0	49·0	SSE	·21
30·00	65·0	55·0	SE	·32	3	30·35	72·0	50·0	NW	·15	3	29·15	68·0	48·0	WNW	·35
29·90	64·0	55·0	SE	·01	4	30·25	70·0	51·0	SW	·00	4	30·00	63·0	50·0	WNW	·00
29·85	67·0	50·0	SSE	·00	5	3 ·15	71·0	50·0	SW	·00	5	29·96	55·0	45·0	NNW	·01
29·90	69·0	53·0	SW	·00	6	30·05	66·0	54·0	NNE	·00	6	29·76	59·0	45·0	SW	·02
29·85	69·0	54·0	SSW	·03	7	29·98	73·0	51·0	WNW	·14	7	29·66	60·0	49·0	WNW	·11
29·85	70·0	56·0	SSW	·09	8	29·56	68·0	49·0	SSW	·18	8	29·75	59·0	48·0	WNW	·00
29·75	77·0	56·0	SSW	·00	9	29·45	69·0	48·0	W	·01	9	30·15	62·0	49·0	S	·11
29·87	75·0	54·0	WNW	·00	10	29·35	72·0	51·0	WNW	·19	10	29·97	56·0	47·0	S	·19
29·55	78·0	58·0	SSW	·02	11	29·73	73·0	52·0	WNW	·00	11	29·98	54·0	52·0	NNE	·00
29·44	77·0	53·0	SW	·00	12	30·15	72·0	53·0	W	·45	12	30·35	55·0	50·0	NNW	·00
29·62	76·0	54·0	W	·08	13	29·95	70·0	52·0	S	·30	13	30·40	65·0	49·0	SSW	·00
29·87	77·0	55·0	WNW	·24	14	29·70	73·0	53·0	WNW	·15	14	30·35	68·0	48·0	N	·05
29·87	61·0	48·0	NW	·05	15	29·42	64·0	54·0	WNW	·89	15	30·06	70·0	50·0	NE	·50
30·05	68·0	46·0	WNW	·01	16	30·05	67·0	45·0	WNW	·00	16	30·15	62·0	49·0	SW	·00
29·90	71·0	51·0	WNW	·06	17	30·05	76·0	47·0	W	·00	17	30·27	68·0	49·0	WSW	00
29·95	68·0	52·0	NNW	·00	18	30·20	77·0	50·0	W	·00	18	30·30	60·0	48·0	E	·00
29·80	69·0	47·0	NNW	·03	19	30·36	75·0	52·0	WSW	·00	19	30·18	64·0	58·0	ESE	·18
29·82	68·0	47·0	NNW	·44	20	30·22	77·0	52·0	SSE	·00	20	29·90	57·0	54·0	NNE	1·02
29·67	55·0	48·0	ENE	1·55	21	30·26	72·0	57·0	WSW	·00	21	29·80	54·0	49·0	E	·10
29·67	65·0	47·0	ENE	·22	22	30·27	72·0	55·0	NNE	·00	22	29·82	57·0	49·0	ENE	·01
29·75	67·0	45·0	WNW	·00	23	30·36	75·0	51·0	NNW	·00	23	30·10	58·0	48·0	SSE	·07
29·80	64·0	48·0	NNW	·21	24	30·35	78·0	50·0	NW	·00	24	29·66	68·0	43·0	SSE	·22
29·95	65·0	58·0	WNW	·03	25	30.25	81·0	55·0	SSE	·00	25	29·67	67·0	53·0	WSW	·15
30·20	69·0	48·0	NNW	·04	26	30·15	82·0	55·0	W	·11	26	29·50	66·0	50·0	SSE	·05
30·30	59·0	50·0	N	·02	27	29·95	70·0	59·0	W	·05	27	29·37	68·0	49·0	WSW	·00
30·20	60·0	49·0	N	·00	28	29·96	72·0	54·0	W	12	28	29·45	67·0	46·0	NNW	·04
29·95	65·0	48·0	ENE	·00	29	29·85	58·0	54·0	NNE	·01	29	29·35	65·0	48·0	NNE	·10
29·75	68·0	51·0	ENE	·00	30	29·82	65·0	51·0	ESE	·00	30	29·60	62·0	42·0	NNE	·07
29·77	70·0	50·0	ESE	·00	31	29·77	68·0	45·0	SSW	·00						
ean Height of Barometer in Month, 29·87.					Mean Height of Barometer in Month, 29·95.						Mean Height of Barometer in Month, 29·79.					
dopted Mean Temperature 59·8.					Adopted Mean Temperature 61·6.						Adopted Mean Temperature 50·6.					
Rainfall, 3·96 in.					Rainfall, 2·96 in.						Rainfall, 4·27 in.					

TABLE XX—Continued.

TABLE OF METEOROLOGICAL OBSERVATIONS

From October to December, 1883.

OCTOBER.						NOVEMBER.						DECEMBER.					
Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.	Date.	Barometer.	Thermometer. Highest.	Thermometer. Lowest.	Direction of Wind.	Rainfall.
1	29·85	53·0	45·0	NNE	·17	1	30·35	51·0	40·0	WSW	·00	1	30·40	52·0	39·0	NNW	·0
2	30·05	51·0	38·0	NNW	·07	2	30·20	49·0	45·0	WSW	·00	2	30·25	50·0	45·0	WNW	·0
3	29·60	52·0	44·0	WNW	·40	3	30·05	50·0	45·0	SSW	·00	3	29·66	49·0	41·0	WNW	·0
4	29·85	58·0	42·0	NNE	·03	4	29·45	51·0	44·0	WSW	·07	4	29·76	44·0	32·0	NW	·7
5	30·15	56·0	39·0	NNW	·06	5	29·37	50·0	41·0	WNW	·07	5	30·22	40·0	33·0	N	·4
6	30·37	58·0	42·0	NNE	·02	6	29·20	49·0	40·0	NW	·01	6	30·35	39·0	31·0	NE	·0
7	30·35	60·0	44·0	WNW	·00	7	29·55	39·0	33·0	WNW	·00	7	30·64	42·0	32·0	N	·0
8	30·52	63·0	46·0	WSW	·00	8	29·60	45·0	36·0	W	·01	8	30·45	43·0	32·0	NNW	·0
9	30·32	65·0	50·0	WSW	·00	9	29·40	49·0	37·0	WSW	·03	9	29·80	44·0	33·0	SW	·0
10	30·15	55·0	49·0	WSW	·21	10	29·45	46·0	33·0	WNW	·00	10	29·80	48·0	34·0	SW	·1
11	29·95	52·0	47·0	N	·00	11	29·75	49·0	35·0	WNW	·00	11	29·55	47·0	37·0	WNW	·1
12	30·15	52·0	36·0	WNW	·00	12	29·85	46·0	32·0	WNW	·06	12	29·55	51·0	36·0	NW	·0
13	30·05	56·0	41·0	S	·00	13	30·15	50·0	35·0	NNW	·00	13	29·60	54·0	36·0	WNW	·0
14	29·82	59·0	45·0	WSW	·02	14	30·22	44·0	34·0	N	·06	14	29·45	49·0	43·0	W	·0
15	29·65	56·0	46·0	WSW	·07	15	30·05	44·0	37·0	NW	·22	15	29·57	47·0	41·0	W	·6
16	29·22	55·0	41·0	WSW	·42	16	29·67	44·0	34·0	NW	·02	16	29·75	42·0	38·0	N	·3
17	29·20	57·0	45·0	WSW	·03	17	29·55	48·0	35·0	SW	·02	17	30·42	41·0	33·0	NNE	·0
18	29·75	52·0	40·0	WSW	·06	18	29·90	46·0	39·0	WSW	·02	18	30·35	46·0	32·0	N	·0
19	29·72	52·0	40·0	W	·00	19	29·67	42·0	37·0	WNW	·07	19	30·35	50·0	36·0	NNW	·0
20	29·52	50·0	41·0	W	·00	20	29·56	46·0	35·0	WNW	·09	20	30·28	53·0	40·0	W	·1
21	29·75	51·0	39·0	NNW	·00	21	29·56	48·0	35·0	WNW	·07	21	29·87	50·0	38·0	W	·0
22	30·02	48·0	35·0	WSW	·07	22	29·55	50·0	35·0	W	·00	22	29·67	51·0	41·0	WNW	·0
23	29·55	47·0	37·0	WNW	·00	23	29·65	50·0	39·0	SSW	·00	23	30·12	50·0	40·0	WSW	·0
24	29·70	52·0	41·0	W	·02	24	29·22	51·0	37·0	WSW	·01	24	30·32	52·[illegible]	42·0	SW	·0
25	29·55	54·0	45·0	WNW	·00	25	28·80	50·0	39·0	SW	·00	25	30·55	54·0	44·0	W	·0
26	30·05	53·0	42·0	WSW	·03	26	28·95	51·0	38·0	SSW	·00	26	30·55	45·0	33·0	NW	·0
27	30·05	54·0	45·0	W	·00	27	29·80	52·0	39·0	W	·06	27	30·47	44·0	37·0	W	·0
28	30·25	56·0	46·0	SSW	·00	28	30·10	52·0	41·0	SSW	·00	28	30·35	46·0	35·0	S	·0
29	30·35	54·0	47·0	S	·00	29	30·25	53·0	45·0	SW	·01	29	30·30	45·0	40·0	SSW	·0
30	30·57	54·0	47·0	S	·00	30	30·20	51·0	46·0	NNW	·09	30	30·45	48·0	41·0	S	·0
31	30·40	51·0	41·0	SSE	·00							31	30·45	49·0	39·0	SSE	·0
Mean Height of Barometer in Month, 29·95.						Mean Height of Barometer in Month, 29·70.						Mean Height of Barometer in Month, 30·10.					
Adopted Mean Temperature 46·8.						Adopted Mean Temperature 42·9.						Adopted Mean Temperature 42·4.					
Rainfall, 1·68 in.						Rainfall, 0·99 in.						Rainfall, 2·71 in.					

(A) TABLE OF DEATHS in the Urban Sanitary District of Sunderland, classified according to Diseases and ages; and showing also the Population and the BIRTHS therein during the Year ending December 29th, 1883.

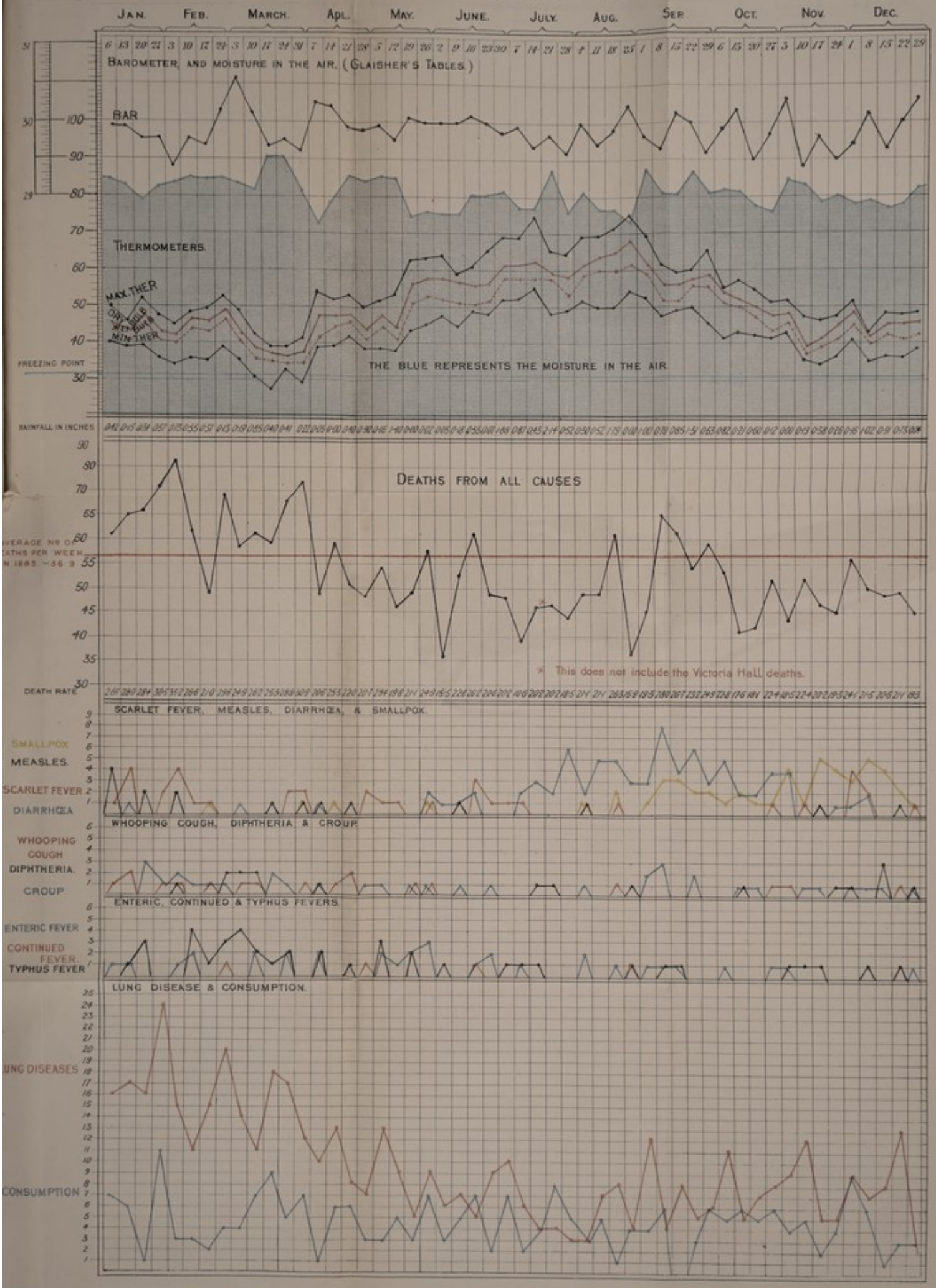
DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																				
																		Continued Fevers.												
	Census, 1881.	Estimated to middle of 1883.		At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.		Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup. (not spasmodic).	Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Doubtful.	Diarrhœa and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.
SUNDERLAND EAST	9,298	9,696	382	226	71	40	14	8	59	34	Under 5	2	—	1	—	7	1	—	—	2	5	1	—	—	—	—	—	2	33	—	—
											5 upwds.	1	—	1	—	—	—	—	5	—	—	—	—	—	1	—	—	14	31	13	5
SUNDERLAND WEST	5,993	6,243	262	173	53	28	11	13	46	22	Under 5	—	2	—	2	2	2	—	1	—	7	—	—	1	—	—	—	1	22	—	—
											5 upwds.	—	—	—	1	1	—	—	1	—	1	—	—	—	—	—	—	14	19	10	9
BISHOPWEARMOUTH NORTH	35,908	37,406	1583	*946	*181	*142	*67	*57	*275	*224	Under 5	12	3	5	4	7	5	2	—	—	20	—	—	—	—	—	—	13	44	—	7
											5 upwds.	30	1	5	3	1	—	31	9	1	—	—	2	5	2	1	—	86	82	74	27
BISHOPWEARMOUTH SOUTH	38,969	40,595	1605	†985	†205	†110	†215	†49	†232	†174	Under 5	1	—	6	5	9	8	—	—	—	17	—	—	2	—	—	—	1	47	—	11
											5 upwds.	5	1	7	2	1	—	3	7	—	2	—	2	3	—	—	—	61	85	67	204
MONKWEARMOUTH	26,094	27,187	1222	631	187	119	30	37	139	119	Under 5	1	8	9	—	6	6	—	1	—	27	—	—	—	—	—	—	4	42	1	7
											5 upwds.	—	1	4	1	—	—	5	9	1	4	1	2	4	—	1	—	40	47	51	12
Public Institutions. HOUSE OF RECOVERY	—	—	—	15	—	1	4	3	7	—	Under 5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
											5 upwds.	13	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
THE INFIRMARY	—	—	—	65	—	3	9	8	40	5	Under 5	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
											5 upwds.	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	1	5	4	21
WORKHOUSE HOSPITALS	—	—	—	223	6	12	11	17	91	86	Under 5	5	—	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	1	—	—
											5 upwds.	15	—	—	—	—	—	28	2	1	—	—	—	1	—	—	—	24	18	15	3
TOTAL	116,262	121,117	5054	2961	697	439	337	164	751	573	Under 5	16	13	21	11	31	22	2	2	2	76	1	—	3	—	—	—	21	188	1	25
											5 upwds.	36	3	17	7	3	—	39	31	2	7	1	6	12	3	2	—	215	264	215	257

*Including deaths at the House of Recovery and Workhouse. †Including deaths at the Infirmary.

(B) TABLE OF NEW CASES OF SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1883, in the Urban Sanitary District of Sunderland, classified according to Localities and Diseases.

NAMES OF LOCALITIES.		NEW CASES OF SICKNESS IN PERSONS BELONGING TO THE DISTRICT, DISTINGUISHING THOSE IN CHILDREN UNDER FIVE YEARS OF AGE.																
								Continued Fevers.										
		Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Doubtful.	Diarrhœa and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Other Diseases, such as Chicken Pox, or Pneumonia, which the Medical Officer of Health thinks well to records.
	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	
1. SUNDERLAND EAST	Under 5	2	1	2	..	1	..	..	1	1	3	..	..	..	..	..	..	....
	5 upwds.	22	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	....
2. SUNDERLAND WEST	Under 5	1	..	..	1	..	..	..	..	..	5	..	..	..	..	..	..	....
	5 upwds.	14	..	..	..	..	..	8	5	..	2	..	..	..	..	..	..	....
3. BISHOPWEARMOUTH NORTH	Under 5	5	8	6	..	2	..	..	..	..	10	..	..	..	..	..	..	....
	5 upwds.	159	1	17	1	..	..	1	16	1	4	..	..	..	..	..	..	....
4. BISHOPWEARMOUTH SOUTH	Under 5	6	..	13	..	1	..	..	1	..	8	..	..	..	..	..	..	....
	5 upwds.	61	..	18	..	..	..	..	8	3	2	..	..	..	..	..	..	....
5. MONKWEARMOUTH	Under 5	2	5	8	..	..	..	..	1	..	7	..	..	..	..	..	..	....
	5 upwds.	56	3	19	..	..	..	2	6	..	2	..	..	..	..	..	..	....
Totals	Under 5	16	14	29	1	4	..	..	3	1	33	..	..	..	..	..	..	....
	5 upwds.	312	4	54	1	..	..	12	35	5	11	..	..	..	..	..	..	....

METEOROLOGICAL AND DISEASE CHART FOR 1883.



Infectious Diseases in Sunderland in 1883

		Estimated Population
Sunderland East	S.E.	8696
Do West	S.W.	6243
Bishopwearmouth North	B.N.	37406
Do South	B.S.	40585
Monkwearmouth	MK	27187
	Total	121117

Small Pox Cases and Deaths	BLUE
Scarlet Fever	SCARLET
Typhus	YELLOW
Enteric	BROWN
Measles	BLACK
Diarrhœa	GREEN

Alfred E. Harris
Medical Officer of Health