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COUNTY COUNCIL OF NORTHUMBERLAND.

ABSTRACT
OF THE
ANNUAL REPORTS
OF THE
MEDICAL OFFICERS OF HEALTH
For the Year 1900,
WITH STATISTICAL INFORMATION AND A
REPORT
ON THE
SANITARY CONDITION OF THE ADMINISTRATIVE
COUNTY.

BY
J. WILLIAM HEMBROUGH, M.D., L.S.Sc., Durh.,
(Fellow of the Society of Medical Officers of Health)
COUNTY MEDICAL OFFICER.

R. Ward & Sons, 33, 35, and 37, High Bridge, Newcastle-on-Tyne.

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NORTHUMBERLAND COUNTY COUNCIL.

REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH
FOR THE YEAR ENDING 31st DECEMBER, 1900.

TO THE CHAIRMAN AND MEMBERS OF THE PROPERTY AND SANITATION
COMMITTEE OF THE SAID COUNCIL.

GENTLEMEN:—

I have pleasure in presenting herewith my summary of the Annual Reports of the Medical Officers of Health, for the year ending 31st December, 1900, in which I have dealt with (a) the sanitary condition and requirements of the county as a whole, and with (b) those of each sanitary district, as ascertained both from the annual reports received, and from personal observation and inspection, so far as time and opportunity have allowed.

Reports have been sent in with one exception, involving two sanitary districts, from all the Medical Officers of Health in the administrative county.

Some of these reports were not received until very late in the year, one in July and one towards the end of August; two, viz., those from the urban district of Whitley and Monkseaton, and from the southern division of the Tynemouth rural district, were never received. These two circumstances have necessitated considerable delay in getting my report ready for the printer it being impossible to calculate any county rates, until the annual reports from all the districts are available for statistical purposes. Owing to the death, early in the present year, of the Medical Officer of Health for the two districts last mentioned, I have been obliged to get what information I could from the clerk of these districts, and from the different medical practitioners resident in, and the Registrars of Births and Deaths connected with, the sanitary districts in question. This also has occupied a considerable time.

Of the 33 reports received, 28 were printed, being a decrease of 3 as compared with the previous year; 1 was type-written (Bellingham); and 4 viz.—those from the urban districts of Berwick-on-Tweed, Cramlington, and Gosforth, and from the rural district of Haltwhistle, were in manuscript form.

I have in each of my previous reports, emphasized the great importance of each district council printing the annual report of its Medical Officer of Health.

SPECIAL REPORTS.

It is still necessary to point out that in every case, in which a medical officer of health sends a special report to the Local Government Board, he is required to send a copy of such report to the County Council; also that school closure requires a special report to be sent to the Local Government Board, and to the County Council. Appended are copies of articles 15 and 16 of the order of the Local Government Board for 1891, relating to these special reports, and also articles 13 and 14 of a memorandum dated July 1897, having reference to the closure of public elementary schools.

"(15) He shall give immediate information to Us of any outbreak of dangerous epidemic disease within the district, and shall transmit to Us a copy of each annual report and of any special report. He shall make a special report to Us of the grounds of any advice which he may give to the sanitary authority with a view to their requiring the closure of any school or schools, in pursuance of the Code of Regulations approved by the Education Department and for the time being in force."

"(16) *At the same time that he gives information to Us of an outbreak of infectious disease or transmits to Us a copy of his annual report, he shall give the like information or transmit a copy of such report to the county council of the county within which his district may be situated.*"

By a later memorandum, dated July, 1897, the Local Government Board further directs as follows:—

"(13) Reports to sanitary authorities, advising the closure of a school or schools in any district are to be treated as 'special' reports within the meaning of the general order of the Local Government Board of March 23rd, 1891, and copies of them are required by Art. 18 (secs. 15 and 16) of that order, to be sent to the Board and to the county council. These reports should state the grounds upon which the Medical Officer of Health advocates the closure of the school or schools in preference to the exclusion of particular scholars."

"(14) All notices of the sanitary authority for the closing of public elementary schools should be addressed, in writing, to the managers, and should state the grounds upon which the closing is deemed necessary."

"All such notices shall specify a definite time during which the school is to remain closed. This should be as short a period as can be regarded as sufficing on sanitary grounds, since a second notice may be given before the expiration of the first, if it should be found necessary to postpone the re-opening of a school. The managers of schools, after complying with the requirements of the sanitary authority, have the right of appeal to the Education Department, if they consider any notice to be unreasonable."

ADOPTIVE ACTS.

There are two—the Infectious Diseases Prevention Act, 1890, and the Public Health Acts Amendment Act, 1890. The Infectious Diseases (Notification) Act, which formerly was an adoptive Act, became compulsory upon all sanitary authorities on Jan. 1, 1900.

BYE-LAWS.

According to the latest information obtained, the undermentioned sanitary authorities have no bye-laws:—The urban districts of Ashington, Cramlington, and Seghill; and the rural district of Morpeth.

In several districts the bye-laws have been in existence for many years without alteration or revision, and entirely fail to comply with present day requirements; this remark applies especially to the bye-laws governing building operations, more particularly in the case of large populations crowded on to a small area, and to those having reference to the prevention of nuisances.

BYE-LAWS CONFIRMED BY THE LOCAL GOVERNMENT BOARD
DURING 1900.

URBAN DISTRICTS—

Blyth	...	...	...	Lodging houses, cleansing and lime washing, and paving of courts and courtyards
Do.	...	...	...	Streets and Buildings
Wallsend	...	...	...	Streets and Buildings

RURAL DISTRICT—

Norham and Islandshire	...	Streets and Buildings
------------------------	-----	-----------------------

SANITARY LEGISLATION.

The law relating to Margarine, and Margarine Cheese is greatly strengthened, and the penalties for offences under the Sale of Food and Drugs Acts, and the Margarine Act, have been much increased in severity. Also on January 1st 1900 the Infectious Diseases (Notification) Extension Act came into force. Its provisions apply to the whole of England and Wales, and have the effect of making the adoption of the Infectious Diseases (Notification) Act 1889 obligatory upon all Sanitary Authorities.

Houses of Working Classes Act. Amendments were made in the above Act, under which any council, other than a rural district council, having adopted Part 3 of the Act 1890 may establish, or acquire lodging-houses for the working classes, under that part of the Act, outside their district; and the council of every rural district may under the new Act, with the consent of the county council, adopt Part 3 of the Act 1890, either for the whole of their district or for any contributory place or places therein. Also under the new Act, an urban council with the consent of the Local Government Board, and a rural district council with the consent of the county council, will be enabled to lease any land acquired by them under and for the purposes of Part 3 of the Act of 1890, to any lessee, for the purpose, and on the condition, that the lessee will carry that Act into execution, by building and maintaining on the land, lodging-houses within the meaning of the Act.

FOOD AND DRUGS ACT, 1875.

On January 1st, 1900, some important provisions and alterations in the Food and Drugs Act, came into force.—The Commissioners of Customs must take for analysis, samples of imported articles of food, and institute proceedings when necessary. The Board of Agriculture may also take for analysis samples of food, and in default of any local authority, may enforce the Acts in such Authority's district, and at the Authority's expense.

The number of samples examined during the year was 269, of which 10 were found to be adulterated. Proceedings were taken against 9 persons, all of whom were convicted; fines and costs to the amount of £16 18s. were imposed. The articles found to be adulterated were Butter (1), Whiskey (2), Milk (3), and Coffee (4).

LOANS.

Loans for sanitary and other public improvements applied for by the Northumberland County Council, and by the undermentioned urban and rural district councils, and Parish council, were sanctioned by the Local Government Board.

Authority.	Purpose.	Amount.	Period of redemption.
NORTHUMBERLAND COUNTY COUNCIL ...		£	
	Lunatic asylum purposes	8,351	25 years
URBAN DISTRICTS—			
Alnwick ...	Land for new street ...	260	50 years
Do. ...	Depôt ...	850	19 "
Do. ...	Land for dwellings ...	1,240	50 "
Ashington ...	Street improvement ...	1,250	18 "
Cowpen ...	Private street improvements	2,000	3 "
Do. ...	Water supply ...	3,500	30 "
Hexham ...	Land for dwellings ...	327	50 "
Do. ...	Street watering ...	42	10 "
Do. ...	Street improvement ...	668	8 "
Do. ...	Do. do. ...	718	8 "
Do. ...	Highway purposes ...	153	19 "
Do. ...	Public walks and pleasure grounds	180	23 "
Do. ...	Water undertaking ...	594	30 "
Do. ...	Land for depôt and stables	268	50 "
Do. ...	Slaughter houses ...	1,400	30 "
Do. ...	Land for slaughter house	405	50 "
Morpeth ...	Water supply ...	1,483	30 "
Newburn ...	Private street improvement	1,660	5 "
Tynemouth ...	Sewerage ...	1,000	30 "
Walker ...	Do. ...	704	30 "
Do. ...	Street improvement ...	7,861	15 "
Do. ...	Refuse destructor ...	8,288	28 "
Do. ...	Electric lighting ...	1,700	10 "
Do. ...	Do. do. ...	18,418	25 "
Wallsend ...	Street improvement ...	4,328	7 "
Do. ...	Public walks and pleasure grounds	1,467	20 "
Do. ...	Street improvement ...	692	12 "
Do. ...	Private street improvement	15,624	7 "
Do. ...	Public walks and pleasure grounds	75	20 "
Whitley & Monkseaton	Private street improvement	4,500	3 "
Willington Quay ...	Sewerage and surface water drainage	800	5 "
Total ...		£ 90,806	
RURAL DISTRICTS—			
Haltwhistle ...	Sewerage ...	920	30 years
Hexham ...	Water supply at Alledale	350	30 "
Do. ...	Sewerage and sewage disposal at Prudhoe	150	30 "
Morpeth ...	Highway improvement	1,400	5 "
Total ...		£ 2,820	
PARISH COUNCIL—			
Haltwhistle ...	Burial accommodation...	740	30 years

**REGULATIONS UNDER THE DAIRIES, COWSHEDS, AND MILKSHOPS ORDER
(OF 1885), AND THE DAIRIES, COWSHEDS, AND MILKSHOPS
AMENDING ORDER OF 1886.**

Very few Sanitary Authorities have adopted any Regulations under this Order, the result being the existence of a vast number of dark, ill-ventilated, undrained, overcrowded, and filthy cowsheds, and of dairies totally unfit for the storage of milk. The reluctance of most Sanitary Authorities to adopt Regulations, appears to arise from the conviction that most of the cow sheds and dairies in their respective districts are so unsatisfactory, that if Regulations were adopted most of the cow-sheds and dairies would have to be improved. It is difficult to follow this line of reasoning, as these unsanitary conditions would appear to some as the strongest argument in favour of Regulations being adopted.

The urban district council of Rothbury, and the rural district councils of Alnwick, and Glendale, forwarded to the Local Government Board for approval, Regulations under the above orders.

HOUSING OF THE WORKING CLASSES.

In many parts of the county, especially in colliery districts, there is a great need of more houses for the weekly wage class. Wherever there is a scarcity of houses, there is, in the great majority, overcrowding, with all the attendant evils both moral, and physical.

In some districts meetings have been held in favour of adopting Part III. of the Housing of the Working Classes Act, with a view of providing additional house accommodation.

SCAVENGING.

On the whole there is a tendency for scavenging operations to be carried out under slightly improved conditions, *i.e.*, in some localities the contents of privy ash-pits are not allowed to accumulate for such long periods as formerly. Still there are comparatively few Sanitary Authorities who scavenge their districts fortnightly, and still fewer weekly. In nearly every district in which the scavenging is carried out by contract, the results have been as before, very unsatisfactory, and complaints numerous. It is needless to say that wherever this work is left for neighbouring farmers to carry out, when they have no other use for their horses and men, house and other refuse is removed at long and uncertain intervals, and nuisance invariably results.

POLLUTION OF RIVERS AND STREAMS.

The sewerage scheme for the village of Ponteland has been commenced and it is believed will be completed during the year 1901. The nuisance so long complained of at Glanton has been removed, by the diversion of the open sewer, and the construction of tanks, etc. The Morpeth Town Council have had a protracted correspondence with the Local Government Board, with reference to plans for sewerage and sewage disposal, but little or nothing seems to have been done in the direction of connecting drains, at present discharging into the river, with existing sewers. An enquiry was held at Willington Quay, on October 31st, by one of the inspectors of the Local Government Board, in consequence of an application from the County Council to have Willington Gut and its tributaries declared streams within the meaning of the Rivers Pollution Prevention Act. Up to the end of the year no intimation of the Central Authority's decision had been received by the County Council.

ISOLATION HOSPITALS.

Sixteen sanitary authorities in the county have still failed to provide any means for isolating cases of infectious disease, or to procure a steam disinfecter, with which to treat beds, mattresses, and other articles which would be injured by boiling.

The necessity of every sanitary authority providing an isolation hospital has been again brought prominently forward by numerous cases of smallpox occurring in different sanitary districts of this county, by a visitation of typhus fever in the rural district of Castle Ward, and in the urban district of Hexham; by an outbreak of bubonic plague in Glasgow, and in this county by numerous cases of scarlatina, diphtheria, and enteric fever. Some of the districts without any isolation accommodation having provided cases of one or more of the three last named diseases during ten or eleven months of the year.

The following sanitary districts have isolation hospital accommodation:—

Urban Districts—Alnwick, Bedlingtonshire, Berwick-on-Tweed, Blyth, Cowpen, Cramlington, Earsdon, Gosforth (tent only), Hexham, Morpeth, Rothbury, Seghill, Tynemouth, Walker, Wallsend, and Willington Quay.

Rural Districts—Belford (2 tents), Rothbury, and Tynemouth No. 2 (tents), and wooden hospital, 4 beds.

The amount of hospital accommodation available for infectious diseases is as follows:—Alnwick 6 beds and 6 cots, say 8 beds; Bedlingtonshire 10 beds; Berwick-on-Tweed 8 beds; Blyth and Cowpen, 18 beds (besides 6 beds usually sufficient for the use of the Blyth Port Sanitary Authority), and an unfurnished building, capable of accommodating 16 patients; Cramlington 12 beds; Earsdon 12 beds; Gosforth 8 beds (tents); Hexham urban 12 beds; Morpeth urban 22 beds; Rothbury, 4 beds, available for either urban or rural district; Seghill 8 beds; Tynemouth urban 10 beds; Walker (in City Hospital), say 9 beds; Wallsend and Willington Quay, joint hospital, 29 beds; Belford rural (2 tents), 6 beds; Tynemouth rural No. 2 (tents) 16 beds, and wooden hospital, 4 beds.

The number of cases treated in these institutions during the year was 127, distributed as follows:—Bedlingtonshire 5; Berwick-on-Tweed 1; Blyth 1; Cowpen 8; Cramlington 1; Rothbury 3; Tynemouth 53; Walker 9; Wallsend 22; Willington Quay 24.

The population of the 19 sanitary districts possessing isolation hospitals, or having made arrangements for the use of isolation hospitals provided by neighbouring districts, is 219,692, and the number of beds (supposing 9 to be available in the City Hospital, for patients from Walker) is 202, giving an average of 1 bed for every 1,087 persons. The population of the 16 sanitary districts having no arrangements for the isolation of infectious diseases is 169,409.

DISINFECTION.

Up to the end of the year 1900, only one sanitary authority in the county had provided a steam disinfecter with which mattresses, bedding, clothing, and other articles which would be damaged by the action of boiling water, could be efficiently disinfected after use by patients suffering from infectious disease. Also almost without an exception, no sanitary authority had any mechanical appliance for spraying or in other ways disinfecting the ceilings, and walls of rooms, or schoolrooms, or of ashpits known to have received infective evacuations. The results of this failure by sanitary authorities to provide means for efficient disinfection, are serious and far-reaching—not only has compensation to be given for bedding, and clothing, etc. destroyed, but what is of far greater importance, efficient disinfection cannot in many instances, under existing conditions, be carried out, and a fresh outbreak results.

I wish to take this opportunity of again thanking the various Medical Officers of Health, Surveyors, and Inspectors, for the information and assistance they have at all times placed at my disposal.

I am, gentlemen,

Your obedient servant,

J. W. HEMBROUGH.

THE COUNTY AS A WHOLE.

AREA.

The area of the county is 1,261,887 acres, divided as follows:—Urban districts, 62,076 acres; rural districts, 1,199,811 acres.

POPULATION.

The population of Northumberland (exclusive of Newcastle-on-Tyne), estimated to the middle of 1900, is 389,101, being an increase of 65,652 over the 1891 census, and an increase of 9,712 over the population estimated to the middle of 1899.

The county, up to the end of 1900, was divided for the purpose of sanitary administration into 35 districts, 23 of which are urban and 12 rural. There are also the Tyne Port, and Blyth Port Sanitary Authorities.

The population of the urban districts (estimated to the middle of 1900) was 260,970, and of the rural districts, 128,131.

The greatest estimated increase in population was in the Ashington urban district (3,000 more than in 1899).

URBAN DISTRICTS.

Alnwick, Amble, Ashington, Bedlingtonshire, Benwell and Fenham, Berwick-upon-Tweed, Blyth, Cowpen, Cramlington, Earsdon, Gosforth, Hexham, Morpeth, Newbiggin-by-the-Sea, Newburn, Rothbury, Seghill, Tynemouth, Walker, Wallsend, Weetslade, Whitley and Monkseaton, and Willington Quay.

RURAL DISTRICTS.

Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshire, Rothbury, Tynemouth No. 1, and Tynemouth No. 2.

The average number of persons per acre was for the county 0·30, for the urban districts 4·20, and for the rural districts 0·10.

This, however, is subject to great variation; thus in the urban district of Willington Quay the average population to the acre is 28·86, while in the urban district of Rothbury it is only 1·26. In the rural districts the highest average per acre is in Tynemouth No. 2 (1·43), and the lowest in Bellingham (0·02).

The area and estimated population of each sanitary district in the administrative county will be found in a table at the end of this summary.

BIRTHS.

The births registered during 1900 numbered 12,157, giving a birth rate of 31·24. In 1899 the birth rate was 31·41.

Of the 12,157 births, 8,881 occurred in the urban, and 3,276 in the rural districts. The birth rate for the former was 34·03 per 1,000 (34·31 in 1899), and for the latter 25·56 (25·99 in 1899).

The following table shows the comparative rates:—

	Birth Rate.	Increase since 1899.	Decrease since 1899.
Administrative County ...	31·24	—	0·22
Urban districts ...	34·03	—	0·28
Rural districts ...	25·56	—	0·43
England and Wales ...	28·9	—	0·4

The three highest birth rates per 1,000 living, were recorded in the following districts:—

Urban Districts.	Birth Rate.	Rural Districts.	Birth Rate.
Weetslade	44·20	Tynemouth No. 2 ...	33·87
Cowpen	43·38	Tynemouth No. 1 ...	31·58
Ashington	41·07	Haltwhistle	28·53

While the three lowest were returned from

Urban Districts.	Birth Rate.	Rural Districts.	Birth Rate.
Whitley and Monkseaton...	16·47	Glendale	16·44
Alnwick	24·51	Bellingham	22·66
Berwick-on-Tweed ...	25·05	Norham and Islandshire...	23·09

DEATHS.

The number of deaths registered during 1900 was 6,822; 4,879 occurred in urban, and 1,943 in rural districts.

The county death rate was 17·53, as compared with 17·71 in 1899, and 17·44 in 1898; that of the urban districts was 18·69, as compared with 19·30 in 1899, and 18·68 in 1898; and the rural death rate was 15·16, as against 14·65 in 1899, and 15·07 in 1898.

The death rate for England and Wales was 18·3, the same as in the previous year.]

The approximate urban death rate for England and Wales was 19·0, and the approximate rural death rate 16·9.

The following table shows the comparative rates:—

	Death Rate.	Increase since 1899.	Decrease since 1899.
Administrative County ...	17·53	—	0·18
Urban districts	18·69	—	0·61
Rural districts	15·16	0·51	—
England and Wales	18·3	Same as in 1899	Same as in 1899

The three highest death rates per 1,000 living in each class of district were, found to be as follows:—

Urban Districts.	Death Rate.	Rural Districts.	Death Rate.
Morpeth	26·25	Rothbury	19·79
Rothbury	24·16	Tynemouth No. 2 ...	18·33
Weetslade	22·60	Bellingham	16·66

while the three lowest were recorded as under :—

Urban Districts.	Death Rate.	Rural Districts.	Death Rate.
Whitley and Monkseaton...	10·36	Morpeth	12·16
Amble	11·55	Norham and Islandshire...	13·19
Newbiggin-by-the-Sea ...	11·83	Glendale	13·98

INFANT MORTALITY (UNDER ONE YEAR).

The number of deaths of children under one year was, in the urban districts, 1,518, and in the rural districts, 431; total, 1,949. The following table shows the comparative rates of infant mortality (deaths under one year per 1,000 births) :—

	Number of Deaths.	Death rate per 1,000 births.	Decrease since 1899.	Increase since 1899.
Administrative County ...	1,949	160·31	13·57	—
Urban districts	1,518	170·92	16·61	—
Rural districts	431	131·56	7·60	—
England and Wales ...	142,958	154	9·00	—

In 7 of the urban districts the infant mortality rate was higher, and in 16 lower, than in 1899.

In 8 of the rural districts the infant mortality rate was higher, and in 4 lower, than in 1899.

DEATHS UNDER 5 YEARS.

The deaths under 5 years numbered 2,720, giving a death rate at this age period of 6·99 per 1,000 living, as compared with 7·43 in 1899, and 7·15 in 1898.

The following tables show the numbers and death rates for the three years 1898-1900 inclusive :—

1898.				
Urban.	Rural.	Total.	Death Rate.	Death Rate. Increase since 1897.
2,003	621	2,624	7·15	0·61
1899.				
Urban.	Rural.	Total.	Death Rate.	Death Rate. Increase since 1898.
2,208	611	2,819	7·43	0·28

1900.				
Urban.	Rural.	Total.	Death Rate.	Death Rate. Decrease since 1899.
2,144	576	2,720	6.99	0.44

DEATHS AT 65 YEARS AND UPWARDS.

The number of deaths at this age period was 1,500, giving a death rate of 3.85 per 1,000 living.

Of these, 845 took place in the urban, and 628 in the rural districts.

The following tables show the number of deaths and death rates for the three years 1898-1900 inclusive :—

1898.					
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1897.	Death Rate Decrease since 1897.
870	601	1,471	4.01	0.29	—

1899.					
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1898.	Death Rate Decrease since 1898.
985	594	1,529	4.03	0.02	—

1900.					
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1899.	Death Rate Decrease since 1899.
872	628	1,500	3.85	—	0.18

ZYMOTIC DISEASES.

The zymotic diseases which are generally notifiable are smallpox, scarlatina diphtheria, fevers, (typhus, enteric, continued and relapsing), and diarrhoea. The seven principal zymotic diseases upon which the zymotic death rate is calculated, are the five just mentioned, and in addition measles, and whooping cough.

674 deaths were caused by the 7 principal zymotic diseases, being a decrease of 196 as compared with the number registered in 1899. Of these deaths, 546 took place in the urban, and 128 in the rural districts. The 3 zymotic diseases which caused the greatest mortality were :—Diarrhoea, 226 ; measles, 151 ; and whooping cough, 105.

Diseases.	Numbers in 1899.	Numbers in 1900.
Diarrhoea	425	226
Measles	88	151
Whooping Cough	140	105

Diarrhoea and measles, not being generally notifiable, I am unable to give any information as to the number of cases notified.

The following table shows the districts, urban and rural, in which the zymotic death rate was highest:—

Urban.	Death Rate.	Rural.	Death Rate.
Newburn	5·57	Rothbury	2·29
Rothbury	5·00	Tynemouth No. 2 ...	2·12
Ashington	2·85	Tynemouth No. 1 ...	1·44

While the lowest death rates from zymotic disease are shown in the next table:—

Urban.	Death Rate.	Rural.	Death Rate.
Alnwick	0·29	Bellingham	0·16
Whitley & Monkseaton ...	0·76	Alnwick	0·49
Seghill	0·83	Norham & Islandshire ...	0·62

The comparative rates are set out in the following table:—

	Death Rate.	Decrease since 1899.	Increase since 1899.
Administrative County ...	1·73	0·46	—
Urban districts	2·09	0·76	—
Rural districts	0·99	0·21	—
England and Wales	2·00	0·21	—

During the year the zymotic death rate showed an increase in 6 urban and 6 rural districts; in 17 urban and 4 rural districts the rate showed a decrease.

The zymotic death rate for Castle Ward, and Rothbury rural was the same as in 1899.

Table showing death rates per 1,000 from each of the seven principal zymotic diseases for the three years ending 31st December, 1900:—

Diseases.	1898.	1899.	1900.	Decrease since 1899.	Increase since 1899.
Smallpox	0·008	Nil	Nil	—	—
Scarlatina	0·15	0·08	0·17	—	0·09
Diphtheria	0·14	0·22	0·11	0·11	—
Fevers	0·23	0·25	0·20	0·05	—
Measles	0·22	0·23	0·38	—	0·15
Whooping Cough ...	0·26	0·36	0·26	0·10	—
Diarrhoea	0·92	1·12	0·58	0·54	—

Cases of zymotic diseases notified from each district —

1 District.	2 Number of cases notified.	3 Number of per- sons per 1000, attacked by zymotic diseases notified *	4 Mortality rate per 1000 from zymotic diseases notified or ascertained.	Decrease since 1899.	Increase since 1899.
URBAN.					
Alnwick	23	3.43	0.29	2.97	—
Amble	14	3.11	Nil.	0.66	—
Ashington	85	6.07	2.85	1.33	—
Bedlingtonshire ...	181	10.05	1.11	3.77	—
Benwell and Fenham ...	63	3.93	2.06	—	0.49
Berwick-on-Tweed ..	23	1.72	2.10	—	0.75
Blyth	33	7.70	2.33	1.71	—
Cowpen	103	5.62	2.51	0.32	—
Cramlington	61	9.10	2.68	1.03	—
Earsdon	64	7.07	1.43	1.28	—
Gosforth	**34	4.00	1.17	0.24	—
Hexham	46	6.57	2.28	—	0.86
Morpeth	9	1.58	1.93	1.10	—
Newbiggin-by-the-Sea...	1	0.39	Nil.	2.81	—
Newburn	134	13.57	5.57	—	1.89
Rothbury	19	15.83	5.00	—	4.17
Seghill	20	8.33	0.83	0.03	—
Tynemouth	281	5.19	1.92	0.54	—
Walker	154	11.00	2.71	0.99	—
Wallsend	121	5.76	2.38	0.77	—
Weetslade	30	6.00	1.00	0.16	—
Whitley & Monkseaton.	23	2.50	0.76	0.65	—
Willington Quay ...	83	8.55	2.57	—	0.82
RURAL.					
Alnwick	78	6.42	0.49	0.08	—
Belford	63	13.60	1.07	—	0.43
Bellingham	23	3.83	0.16	—	0.16
Castle Ward	36	3.81	0.84	same as in 1899	same as in 1899
Glendale	24	2.36	0.78	—	0.59
Haltwhistle	81	9.55	0.82	—	0.23
Hexham	131	4.53	0.86	0.60	—
Morpeth	41	2.37	0.98	—	0.10
Norham & Islandshire...	15	2.35	0.62	—	0.15
Rothbury	57	11.87	2.29	same as in 1899	same as in 1899
Tynemouth No. 1 ...	96	9.94	1.44	0.46	—
Tynemouth No. 2 ...	92	8.87	2.12	1.24	—

* Exclusive of measles and whooping cough, the attack rate for which cannot be ascertained, owing to these two diseases not being generally notified.

** 10 of these cases occurred in the Chadwick Home.

The calculations in columns 2 and 3 do not include 429 cases of measles nor 10 of whooping cough occurring in the urban district of Hexham, as in the majority of districts this disease is not notifiable.

CHOLERA.

There were no cases of cholera during the year.

SMALLPOX.

Three cases of smallpox were reported during the year; one in June from the Blyth Port Sanitary Authority, imported from Bergen; and

one a Spanish sailor from the Tyne Port Sanitary Authority; and one from the borough of Tynemouth, this last patient having contracted the disease from the Spaniard.

CHICKEN POX.

Chicken pox was present in 10 urban, and 5 rural districts.

SCARLATINA.

1765 cases of scarlatina were notified during the year; 1174 in the urban, and 591 in the rural districts, causing 69 deaths. The mortality from this cause in 1899 was 34, and in 1898 the deaths numbered 58. Of the 69 deaths, 51 occurred in the urban, and 18 in the rural districts.

The following table gives the comparative death rates:—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·17	—	0·09
Urban districts	0·19	—	0·09
Rural districts	0·14	—	0·08
England and Wales	0·12	same as in 1899.	same as in 1899.

In the urban districts, the greatest number of cases occurred in Tynemouth (238), Bedlingtonshire (145), and Walker (127).

In the rural districts, the greatest number of cases occurred in Hexham (111), Tynemouth No. 2 (87), and Haltwhistle (75).

MEASLES.

There were 151 deaths from measles, 132 of which occurred in the urban, and 19 in the rural districts.

The following table shows the comparative rates:—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·38	—	0·15
Urban districts	0·50	—	0·21
Rural districts	0·14	—	0·04
England and Wales	0·39	—	0·08

TYPHUS FEVER.

About thirty-two cases, resulting in 5 deaths occurred during the year, the chief incidence of the disease being on the Hexham urban district. The disease was imported from Scotland, to Tone Pit, at which place the patient was nursed by her mother, one of a gipsy family camping on Ryal Common. The mother having presumably caught the infection, returned ill to the place last mentioned, and died there. The daughter was removed to the Hexham workhouse, and the family from Ryal Common also removed to Hexham, obtaining lodgings in "The Mystery." Apparently from these sources of infection 2 inmates of the workhouse contracted Typhus fever; 13 cases occurred in "The Mystery"; 8 in Foundry Lane; 1 in Bridge End; 1 in Back Street; 1 in Quartrebras Cottages; 1 in Portland Terrace; 1 in Pearson's Terrace; 1 in Tannery Terrace; and 1 (a nurse) in the isolation hospital.

As stated in my reports to the Property and Sanitation Committee, too much cannot be said in praise of the constant vigilance and unremitting efforts of the Health Committee, the medical officer of health, and the sanitary inspector. These all met every morning for a considerable period, to confer as to the latest developments and measures to be adopted; a house to house visitation of the less favoured portions of the town was carried out; schools were closed; every case as it made its appearance was removed to the isolation hospital; nurses, female helpers, and a caretaker, were engaged. The hospital but recently completed, was of the greatest possible value in isolating these cases; indeed if means of isolation had not been ready to hand, it is impossible to estimate the extent to which the outbreak might not have extended.

ENTERIC FEVER.

295 cases of enteric fever were notified during the year, resulting in 62 deaths; the mortality from this cause in 1899 was 95, and in 1898, 86. Of these 62 deaths, 48 occurred in the urban, and 14 in the rural districts.

The following table shows the comparative rates:—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·15	0·10	—
Urban districts	0·18	0·14	—
Rural districts	0·10	Same as in 1899.	Same as in 1899.
England and Wales	*	—	—

* The Registrar-General does not give the death rate for Enteric (or Typhoid) Fever singly.

Of the 295 cases, notified or ascertained during the year, 223 occurred in the urban, and 72 in the rural districts.

The number of cases notified per 1000 living was 0·75. In the urban districts the greatest number of cases occurred in Cowpen (48), Ashington (27), and Newburn (27).

In the rural districts the greatest number of cases occurred in the Tynemouth No. 1 (35), and Morpeth (13), districts.

The period of the year during which enteric fever was most prevalent, was the months of July, August, September, October, November, and December.

DIPHTHERIA AND MEMBRANOUS CROUP.

235 cases were notified during the year, 213 being returned as diphtheria, and 22 as membranous croup.

The diseases (one or both of them) were notified or ascertained from the following 29 districts (24 districts in 1899):—

Urban—Alnwick, Ashington, Bedlingtonshire, Benwell and Fenham, Berwick-on-Tweed, Cowpen, Cramlington, Gosforth, Hexham, Morpeth, Newburn, Tynemouth, Walker, Wallsend, Weetslade, Whitley and Monk-seaton, and Willington Quay.

Rural—Alnwick, Belford, Bellingham, Castle Ward, Glendale, Halt-whistle, Hexham, Morpeth, Norham and Islandshire, Rothbury, Tynemouth No. 1, and Tynemouth No. 2.

44 deaths occurred from the above diseases during the year; 34 deaths were registered in the urban, and 10 in the rural districts.

The following table shows the comparative rates :—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·11	0·11	—
Urban districts	0·13	0·09	—
Rural districts	0·07	0·16	—
England and Wales	0·29	Same as in 1899.	Same as in 1899.

WHOOPING COUGH.

105 deaths were caused by whooping cough, 87 of which took place in the urban, and 18 in the rural districts.

The following table shows the comparative rates :—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·26	0·10	—
Urban districts	0·33	0·12	—
Rural districts	0·14	0·06	—
England and Wales	0·34	—	0·04

PUERPERAL FEVER.

This disease caused 17 deaths during the year, as compared with 14 in 1899. Of these deaths, 11 occurred in the urban, and 6 in the rural districts.

The following table indicates the comparative rates :—

	Death Rate. per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·04	—	0·01
Urban districts	0·04	—	0·01
Rural districts	0·04	—	0·01

ERYSIPELAS.

Erysipelas caused 21 deaths during the year, 13 in the urban, and 8 in the rural districts.

The comparative rates will be seen by reference to the following table :—

	Death Rate. per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·05	—	0·03
Urban districts	0·04	—	0·02
Rural districts	0·06	—	0·04

DIARRHŒA.

The number of deaths from this cause was 226, as compared with 425 in 1899, and 338 in 1898. Of these deaths 180 occurred in urban, and 46 in rural districts.

The following table shows the comparative rates :—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	0·58	0·54	—
Urban districts	0·68	0·77	—
Rural districts	0·35	0·12	—
England and Wales	0·69	0·29	—

PHTHISIS.

537 deaths were caused by this disease in the Administrative County during the year, distributed as follows :—370 in the urban, and 167 in the rural districts. The number of deaths in 1899 was 482, and in 1898 was 485.

The comparative rates are shown in the following table :—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	1·38	—	0·11
Urban districts	1·41	—	0·07
Rural districts	1·30	—	0·17
England and Wales ... ..	*	.....	.....

* The Registrar-General does not give the death rate except for London.

RESPIRATORY DISEASES.

Respiratory diseases (exclusive of phthisis), caused 955 deaths in the Administrative County during the year, 712 taking place in the urban, and 243 in the rural districts.

The following table shows the comparative rates :—

	Death Rate per 1,000.	Decrease since 1899.	Increase since 1899.
Administrative County	2·45	0·11	—
Urban districts	2·72	0·15	—
Rural districts	1·89	0·06	—

PORT SANITARY AUTHORITIES.

THE TYNE.

Medical Officer of Health—WILLIAM EDMUND HARKER, M.D., B.H.Y.

During the year 8,473 vessels were inspected.

Vessels arriving coastwise	4,034
Fishing vessels arriving coastwise	849
Vessels arriving from Foreign Ports	3,590
Total	<u>8,473</u>

The above vessels are further classified thus :—

British steamers	...	...	...	...	...	4,632
„ sailing vessels	...	...	...	...	...	502
„ fishing „	...	...	...	...	...	849
Foreign steamers	...	...	...	...	...	1,943
„ sailing vessels	...	...	...	...	...	547
Total	...	...	...	...	...	<u>8,473</u>

In addition to inspecting the above, the following extra visits were made :—

Extra visits paid	...	...	...	...	...	344
Visits to water boats	...	...	...	...	...	36
„ gangways	...	...	...	...	...	29
Total of extra visits	...	...	...	...	...	<u>409</u>

The number of emigrants passing through the Tyne Port—as far as is known—was 1,446, being a decrease of 932, as compared with the previous year.

28 patients were admitted to the Floating Hospital, 4 to the Deans Hospital, South Shields, and 1 to the North Shields Infectious Hospital.

348 cases of sickness were reported on board vessels arriving in the Port, this total included, amongst others, smallpox (or suspected smallpox) 5; scarlet fever 2; influenza 45; enteric fever 44; malarial fever 14; diphtheria 1; consumption 10; and heart disease 8.

The number of structural (372), and sanitary defects (838), discovered, were fully rectified.

The Inspectors examined 1,233 consignments, rags, 13; onions, 7; wheat, 287; Foreign and British fish, 849; potatoes, 22; and fruit, 55.

28 water boats were examined, and the tanks found to be in good condition.

The anxieties and responsibilities of all Port Sanitary Authorities were largely increased during the year under consideration, in consequence of the outbreaks of plague in foreign ports, with which British ports are in direct communication, and also owing to several cases having occurred in Glasgow.

A conference of county, borough, and port medical officers of health was held, to consider whether any, and if so, what additional precautions could be taken. Amongst the arrangements, then and subsequently made, were the provision of anti-plague serum, for the treatment of any case which might occur, and an arrangement made between the Tyne Port Sanitary Authority, and the various local authorities on Tyneside, by which the floating hospital was reserved for cases of plague, and the isolation hospitals of the other authorities made available for cases of smallpox.

THE BLYTH.

Medical Officer of Health, JOHN CROMIE, L.R.C.P., L.R.C.S.

The number of vessels arriving in the Port during the year was 2,513, representing a tonnage of 1,637,382 tons register; this is an increase over the previous year of 100 vessels, and of 36,527 tonnage.

The ships are classified as follows :—

British steamers	...	...	...	...	...	1,059
„ sailing ships	...	...	...	...	...	90
Total number of British vessels	...	...	...	...	...	<u>1,149</u>

Foreign steamers	...	...	...	...	...	1,247
„ sailing ships	...	...	...	...	...	117
Total number of Foreign vessels						<u>1,364</u>

These figures show an increase of 110 British vessels, and a decrease of 10 Foreign vessels arriving in Port.

Of the total number of arrivals, irrespective of Nationality, 1148 came direct from Foreign Ports, and 1365 from British Ports, where they had previously discharged their cargoes.

The following table shows the various cases of illness on board the ships, and reported to the Medical Officer of Health, and also shows the Nationality of the patient and the form of disease.

Date of Arrival.	Name of Vessel.	Nationality.	Where from	Nature of Illness.
May 3rd	Ameer S.S.	Russian	Dunkirk	Pneumonia
May 21st	Fernmoor „	British	Aarhuus	Typhoid fever
May 28th	St. Andrew, „	Norwegian	Antwerp	Typhoid fever
June 12th	Maria „	Grecian	Bergen	Smallpox
June 22nd	Klondyke „	Norwegian	Rotterdam	Typhoid fever
July 9th	Mireille „	French	Antwerp	Febricula
July 24th	Helga „	Danish	Honfleur	Pneumonia
July 30th	Hanso, barque	Russian	Ghent	Catarrh
Sept. 17th	Elies „	Russian	St. Nazaire	Mania
October 8th	Gordonia S.S.	British	Drontheim	Asthma
October 12th	Reas „	German	Rotterdam	Catarrh
October 30th	Dan „	Danish	Ghent	Catarrh
Nov. 13th	Franz „	German	Dordrecht	Asthma
Dec. 20th	Kar „	Danish	Rouen	Catarrh
Dec. 22nd	Reas „	German	Rotterdam	Febricula

All the cases of infectious disease were removed to the hospital, the ships thoroughly cleansed, disinfected, and fumigated, and in the case of the s.s. Maria, the whole crew were vaccinated.

The number of structural defects found was 36, classified as follows:— Defective ventilation in crew space, 1; defective ventilation in w.c., 1; overhead iron decks and beams sweating, causing damp forecables and wet beds, 6; defective glasses in side ports and forecables, 21; bad floors in forecable, 1; leaky decks, 3; leaky bogeys, 3; all these defects occurred in British vessels, no record being kept of structural defects found in Foreign vessels.

The number of sanitary defects found was 250 (118 in British, and 132 in Foreign vessels), these included, drinking water unfit for use, 4; dirty forecables, 125; and dirty w.c.'s, 114.

Hospital—During the year, 18 cases of infectious disease were removed to the Port Hospital, 6 of these were from vessels arriving in Port; 9 from Cowpen, 2 from Blyth, and 1 from Ashington.

Requirements. A steam disinfecter is urgently required.

The anxieties and responsibilities of all Port Sanitary Authorities were largely increased during the year under consideration, in consequence of the outbreaks of plague in foreign ports, with which British ports are in direct communication, and also owing to several cases having occurred in Glasgow.

A conference of county, borough, and port medical officers of health was held, to consider whether any, and if so, what additional precautions could be taken. Amongst the arrangements, then and subsequently made, were the provision of anti-plague serum, for the treatment of any case which might occur, and an arrangement made between the Tyne Port Sanitary Authority, and the various local authorities on Tyneside, by which the floating hospital was reserved for cases of plague, and the isolation hospitals of the other authorities made available for cases of smallpox.

URBAN DISTRICTS.

ALNWICK.

Medical Officer of Health, G. F. EASTON, M.D.

Area, 4,777 acres; Estimated population, 6,691; Birth rate, 24.51; Death rate, *17.33; Zymotic death rate, 0.29; Infant mortality rate (per 1,000 births), 170.73; Phthisis death rate, 1.94; Death rate from respiratory diseases, 2.98.

All the above rates show a decrease over those of the previous year; the difference being as follows:—Birth rate, 0.39; Death rate, 7.42; Zymotic death rate, 2.97; Infant mortality rate (per 1,000 births), 1.88; Phthisis death rate, 0.58; and Respiratory death rate, 0.13.

Of the total deaths (116), 63 were males, and 53 females; 15 of these deaths occurred in public institutions; phthisis caused 13; zymotic diseases, 2; and respiratory diseases, 20 deaths. There were 25 cases of infectious diseases notified, as follows:—Diphtheria, 8; Membranous croup, 2; erysipelas, 2; and scarlet fever, 13.

It is worthy of note that there were no deaths from whooping cough, scarlatina, measles, enteric fever, or diarrhoea.

Improvements. The water main in Swansfield Park Road has been extended, and the main in Prudhoe Street is also to be extended. The Isolation Hospital has been re-decorated and the terms of admission more accurately defined. The subject of the waste ground in Clayport has been finally settled, the Duke of Northumberland having undertaken to provide materials for enclosing the same with a post and chain fence, which the Council are to erect and maintain. The chapels at the cemetery have been heated by steam and otherwise improved. Over 360 nuisances have been abated during the year.

The Medical Officer of Health points out that during the year a diligent search has been made for an increase in the water supply, but this has proved disappointing, and had to be abandoned. There is every prospect however, of better results being obtained at Rugby, where the Committee are still pursuing their search.

Requirements. A disinfectant at the isolation hospital; the provision of better lodging house accommodation; attention to the sewerage scheme for Canongate and Bailiffgate, which under present conditions causes gross pollution of the river Aln; completion of the town improvement scheme on the south side of Clayport, and attention to other insanitary areas. An increased water supply for the town generally, and a more satisfactory supply for some of the cottages on the upper part of the Moor—Hadwin's Close, Freeman's Hill farm, and buildings, Moor House, and cottage—the supply for these outlying places being derived either from dip wells, or from water taps at long distances from some of the houses; some of the cottages on the low side of the Moor also are dependent upon taps at a considerable distance.

* 15.09 if the deaths of 15 persons occurring in Public Institutions are deducted.

AMBLE.

Medical Officer of Health—W. SMYTH, M.B., C.M.

Area, 1218 acres; Estimated population, 4,500; Birth rate, 35.55; Death rate, *11.55; Zymotic death rate, nil; Infant mortality rate (per 1,000 births), 112.50; Phthisis death rate, 0.66; Death rate from respiratory diseases, 1.33.

The birth rate, and the respiratory death rate, have both increased, the former by 4.89, and the latter by 0.67; the remainder of the above rates have all decreased as follows:—General death rate by 3.78; zymotic death rate by 0.66; phthisis death rate by 0.22; and the infant mortality rate by 126.63.

Of the total deaths (52), 18 were of children under one year, and 10 of persons 65 years and upwards. Phthisis caused 3 deaths; respiratory diseases, 6; and heart disease, 3; there were also 2 premature births. There were no deaths from zymotic diseases. Fourteen cases of infectious disease were notified, as follows:—Scarlet fever, 12; and enteric fever, 2.

Of the total births (160), 80 were males and 80 females; this is the highest number of births recorded in the district during the past 10 years.

Improvements. Extensions of water mains; new houses built (50 plans having been passed).

Requirements. An isolation hospital, steam disinfecter and mortuary; a better system of scavenging, i. e., carried out by the sanitary authority, instead of by a contractor; abolition of some objectionable privy ashpits; relaying of sewers in Church Street, Bridge Street, and Queen Street, in which localities the sewers do not take the storm water, and sewage backs up into the yards and cellars; paving of some new streets is urgently required, and more ample house accommodation, so as to obviate overcrowding, several instances of which have occurred.

* 10.88 if 3 deaths from accidents are deducted.

ASHINGTON.

Medical Officer of Health—ALEXANDER BLAIR, M.B., C.M.

Area, 2,864 acres; Estimated population, 14,000; Birth rate, 41.07; Death rate, *16.28; Zymotic death rate, 2.85; Infant mortality rate (per 1,000 births), 200; Phthisis death rate, 0.64; Death rate from respiratory diseases, 2.78.

All the above rates show a decrease over those for the previous year, as follows:—Birth rate, 2.56; death rate, 2.17; zymotic death rate, 1.33; infant mortality rate, 6.25; phthisis death rate, 0.36; and respiratory death rate, 0.76.

575 births were registered during the year—273 males, and 302 females—being an increase of 95 over the number for the previous year. Of the total deaths (228), 126 were males, and 102 females; 115 were children under 1 year, and 27 were persons 65 years and upwards. Zymotic diseases caused 40 deaths; (measles, 1; scarlet fever, 4; whooping cough, 4; diphtheria and membranous croup, 2; enteric fever, 5; and diarrhoea, 24); phthisis caused 9 deaths; respiratory diseases, 39; heart disease, 10; accidents, 6; and premature births, 16.

The Medical Officer of Health again comments upon the high infant mortality, which this year exceeds half the total deaths from all causes in the district.

The cases of infectious disease notified, numbered 96, as follows:—Diphtheria, 1; membranous croup, 4; erysipelas, 11; scarlet fever, 48; enteric or typhoid fever, 27; and continued fever, 5. Two cases of

enteric fever were removed from the district to the isolation hospital of the Blyth Port Sanitary Authority. A very useful table is embodied in the report of the Medical Officer of Health, showing the number, and causes of deaths in each month of the year.

Improvements. Three new sewers have been laid; a large number of houses have been built (though the absence of building bye-laws is sadly apparent in the houses erected, and streets formed, during the last few years at Hirst), and many improvements effected as regards the channelling and draining of the main road, and the substitution of asphalt and concrete for cinder paths; the lighting of the district has also been considerably improved; scavenging has been taken over by the district council, (by whom, however, some of the work has unfortunately been let to contractors); pails for use in houses in which are patients suffering from enteric fever, have been provided.

Requirements. Bye-laws for the regulation of building operations, and the better sanitary control of the district are urgently required for this populous district; at present there are none, neither are there any regulations under the Dairies, Cowsheds, and Milkshops Order. Probably this cannot be said of any other urban district, having the same population, in the United Kingdom. An isolation hospital and steam disinfectors are needed. The erection of an isolation hospital has been talked about for some years, and from time to time plans have been prepared, but, as in the matter of bye-laws, the initial stage only has been reached; both are "under consideration"! There is nothing to prevent houses being built deficient in every sanitary requirement, and should an extensive outbreak of infectious disease occur, the sanitary authority have no means of separating the infectious from the healthy, and this, in spite of the fact, that in hardly any of the houses is isolation possible.

* 15.85 if 6 deaths resulting from accidents are deducted.

BEDLINGTONSHIRE.

Medical Officer of Health—D. CARMICHAEL, F.R.C.S., L.R.C.P., Edin.,
L. and L.M.

Area, 8,435 acres; Estimated population, 18,000; Birth rate, 39.61; Death rate, *20.50; Zymotic death rate, 1.11; Infant mortality rate (per 1,000 births), 175.31; Phthisis death rate, 1.22; Death rate from respiratory diseases, 2.66.

Of the above rates, all have decreased except that from phthisis, which shows an increase of 0.17; the decrease in each case is as follows:—General death, 1.77; zymotic, 3.77; infant mortality, 54.10; respiratory, 0.49; and birth rate, 1.55.

Of the total deaths notified (369), 125 were of children under 1 year, and 75 of persons 65 years and upwards.

Phthisis caused 22; respiratory diseases, 48; zymotic diseases, 20; heart disease, 34; and accidents, 11 deaths; there were also 12 premature births.

206 cases of infectious disease were notified during the year, classified as follows:—Diphtheria, 4; membranous croup, 1; erysipelas, 23; scarlet fever, 145; enteric fever, 26; puerperal fever, 2; and continued fever, 5.

This district was the seat of three epidemics, viz:—measles commencing in January; influenza during the months of February, March, April, and May; and scarlatina, which spread over the whole district from June to December, the incidence of the disease being the most marked in Scotland Gate, Choppington Colliery, and Cambois. Whooping cough was also prevalent throughout the district.

Improvements. The whole of Choppington High Pit sewers have been laid with nine inch socketed pipes in place of the old inefficient field pipes;

the sewer at Rutherford Street has been relaid, and new ones constructed at Freehold Terrace, Sheepwash Bank, Catholic Row (Bedlington), Brown's Cottages (Cambois), and at Scotland Gate. The sewer at Double Row (West Sleekburn), has been relaid with 9 inch pipes. A new outlet sewer has been constructed at Scotland Gate, and new sewer channels laid at Barrington Colliery, and Doctor Pit. Houses at Scotland Gate have been repaired, and made fit for human habitation. Two hundred and six houses have been disinfected. The new sand filter at the Waterworks was completed.

Requirements. Prevention of overcrowding in several portions of the district; conversion of some privy ash-pits into w.c.'s, especially at Scotland Gate, and Stakeford Village; disinfection, by the sanitary authority, of houses in which cases of Pulmonary consumption have occurred; additions to and remodelling of the isolation hospital; the provision of a steam disinfecter.

* 19.77 if 11 deaths from accidents, and 2 suicides are deducted.

BENWELL AND FENHAM.

Medical Officer of Health—N. HARDCASTLE, M.R.C.S., L.S.A., L.M., L.S.Sc.

Area, 1367 acres; Estimated population, 16,000; Birth rate, 40.62; Death rate, *18.43, Zymotic death rate, 2.06; Infant mortality rate (per 1,000 births), 193.84; Phthisis death rate, 1.62; Death rate from respiratory diseases, 3.68.

The birth and death rates have decreased, the former by 2.45, and the latter by 0.49; the zymotic, infant mortality, phthisis, and respiratory death rates have increased by 0.49, 3.13, 0.70, and 0.04, respectively. 295 deaths were registered from all causes; of these 126 were children under one year, and 37 persons over 60. Phthisis caused 26 deaths (an increase of 13 over the number for the previous year); respiratory diseases 59; and heart disease 22. Zymotic diseases caused 33 deaths as follows:—Measles, 2; scarlet fever, 2; whooping cough, 3; diphtheria and membranous croup, 1; and diarrhoea, 25. Eighty-nine cases of infectious disease were notified during the year, classified as follows:—Diphtheria, 2; erysipelas, 26; scarlet fever, 59; and enteric or typhoid fever, 2. These returns were made from the localities of South Benwell, 42; Scotswood, 22; New Benwell, 14; Paradise, Delaval, and Handyside's Buildings, 7; and from Benwell, 4.

The district is increasing with marvellous rapidity; not only has the population increased by 6,000 since 1891, but the number of inhabited houses has also increased, from 1,915, to 3,802; the average number of inmates per house is now 4.2, whereas in 1891, it was 5.22.

The Medical Officer divides his district, for statistical purposes, into ten localities, giving under each, the number of deaths which have occurred during each of the years 1898, 1899, and 1900, and the number of deaths registered from each zymotic disease in the several sub-divisions of his district; also for the year 1900, the number of cases of each infectious disease notified, and the localities in which such diseases occurred.

The Medical Officer again strongly urges the necessity of an isolation hospital, and points out the unenviable position the authority occupies, as regards its inability to isolate infectious disease; he adds, "So far we have escaped smallpox, cholera, or typhus; with an incidence of any of these diseases (the former is already on our confines), we are, in our present condition, entirely without any means to combat disease, or prevent its spread."

Improvements. The dealing with the drainage of the Fenham Building Estate has now been determined upon; a special sewer is to be constructed

at a cost of £10,000. Many houses of a satisfactory character, with a sufficiency of air space, have been erected; the drains of each house have been tested before occupation. No privies or ashpits are now allowed in the district, the few existing are to be abolished; water closets and ash bins are used, the refuse being collected at frequent intervals. A destructor is to be erected, and a site has been obtained for the purpose. An abbatoir has been erected and is now in operation. The schools have been visited 14 times during the year, while house to house visitations have been made on 4 occasions. Over 500 nuisances have been successfully dealt with, and 862 drains have been tested, 229 of which were found to be defective.

Requirements. An isolation hospital, and steam disinfecter; the medical practitioners of the district should avail themselves of the privilege of the free bacteriological examination, in cases of suspected disease, afforded by the Council.

* 17·81 if 9 deaths resulting from accidents, and 1 suicide are deducted.

BERWICK-UPON-TWEED.

Medical Officer of Health, D. HEAGERTY, L.R.C.P., L.R.C.S., L.M.

Area, 6,930 acres; Estimated population, 13,330; Birth rate, 25.05; Death rate, *21.68; Zymotic death rate, 2.10; Infant mortality rate (per 1,000 births), 176.64; Phthisis death rate, 2.02; Death from respiratory diseases, 2.40.

Of the above rates, the birth rate, and respiratory death rate, have decreased, the former by 3.30, and the latter by 0.37; the general death rate has increased by 3.68; the Zymotic by 0.75; phthisis rate by 0.45; the infant mortality rate has also increased by 20.56 per 1,000 births. Of the total deaths (289), 59 were children under 1 year, and 85 persons of 65 years and upwards. Zymotic diseases caused 28 deaths; (whooping cough, 16; enteric fever, 2; and diarrhoea, 10); phthisis, 27; respiratory diseases, 32; and heart disease, 45. Eleven deaths resulted from accidents, and 12 from premature birth.

The number of cases of infectious disease notified was 33, classified as follows:—Diphtheria, 2; erysipelas, 8; scarlet fever, 13; enteric fever, 8; and puerperal fever, 2; 29 of these were notified from Berwick, 3 from Tweedmouth, and 1 from Spittal. The Medical Officer of Health divides his district into three localities, viz:—Berwick, Tweedmouth, and Spittal.

Improvements. The drainage to the Walker Gate Lane and Hatters Lane districts has been much improved. All piggeries within 100 feet of dwellings have been abolished, and 3 persons have been convicted and fined for keeping pigs within the prescribed distance. Eight cases of overcrowding have been abated, and, at the time of writing, there was no case of overcrowding known to the Medical Officer of Health, existing in the district. Decomposed fish and fruit have been condemned and destroyed. All ships entering the port have been boarded by the inspector, and found with a clean bill of health.

Requirements. The Report of the Medical Officer of Health should be printed and circulated. An isolation hospital and steam disinfecter are much needed, and also regulations under the Cow-sheds, Dairies, and Milk Shops Order. A proper and abundant water supply is required for Tweedmouth, and Spittal. West Street, Spittal, requires repaving.

* The general death rate is reduced to 20·33 if 18 deaths occurring in public institutions are deducted.

BLYTH.

Medical Officer of Health—JOHN CROMIE, L.R.C.P., L.R.C.S.

Area, 1,442 acres; Estimated population, 4,283; Birth rate, 36.65; Death rate, *21.94; Zymotic death rate, 2.33; Infant mortality rate (per 1,000 births), 140.12; Phthisis death rate, 2.33; Death rate from respiratory diseases, 1.86.

Of the above rates, the only one which shows an increase over that for the previous year is the phthisis death rate, which has increased by 0.91; the others have all decreased as follows:—Birth rate, 8.28; death rate, 2.78; zymotic death rate, 1.71; respiratory death rate, 2.89; and infant mortality rate, 60.93. Of the total deaths (94), 22 were of children under 1 year, and 12 of persons 65 years and upwards. Zymotic diseases caused 10 deaths; (measles, 2; whooping cough, 1; enteric fever, 1; and diarrhoea, 6); phthisis caused 10 deaths, respiratory diseases, 8, heart disease 9, and accidents 9; there were also 4 premature births. Forty-one cases of infectious disease were notified, classified as follows:—Erysipelas, 7; scarlet fever, 27; enteric fever, 4; continued fever, 2; and puerperal fever, 1.

During the year the name of the district has been altered from "Blyth South Urban District" to "Blyth Urban District."

The Medical Officer of Health divided his district into 2 localities, as shown in the following table:—

Localities.	Population.	Number of Deaths.	Death rate.	Zymotic Death rate.	Respiratory Death rate.	Phthisis Death rate.	Infant Mortality rate per 1,000 births.
North Ward ...	3009	77	25.58	2.65	1.66	2.99	150.94
South Ward ...	1274	17	13.34	1.56	1.56	0.78	117.64

Scarlet fever was more or less epidemic throughout the greater part of the year, particularly during the first 6 months; of the total number of cases notified (27), 19 occurred in the North, and 8 in the South Ward; all were of a mild type, and resulted in no deaths.

The Medical Officer of Health says, regarding the water supply:—"The water supply I regret to say still remains under private control. . . . The character of the water supplied is certainly not all that could be desired, nor is the method of filtration the best, but I have carefully watched, and the flow is steady and constant, and up to now I have not been able to detect any gross bacteriological impurities. The chemical analysis shows it as much too hard."

Improvements. Eighteen owners of property have abolished the privy ash-pits, and adopted the pail system. Eight new houses have been certified as fit for habitation. A new sewer has been constructed to convey the sewage from Railway Cottages, and Old Newsham, direct to the sea, thus obviating the pollution of the Link House Burn. Many minor improvements have been made in the sewerage systems.

Requirements. A steam disinfecter. The abolition of all ash middens, and the adoption of the pail system. An increased domestic water supply under the control of the sanitary authority.

* 17.27 after deducting 6 deaths in public institutions, and 14 deaths of strangers occurring in, but not belonging to, the district.

COWPEN.

Medical Officer of Health, R. LAING, L.R.C.P., M.R.C.S. Eng., L.M., D.P.H.

Area, 1,737 acres; Estimated population, 18,300; Birth rate, 43.38; Death rate *19.61; Zymotic death rate, 2.51; Infant mortality rate (per 1,000 births), 204.03; Phthisis death rate, 1.58; Death rate from respiratory diseases, 2.02.

Of the above rates, the Phthisis death rate has increased by 0.50. The remaining rates have all decreased as follows:—Birth rate, 0.08; general death rate, 3.97; zymotic death rate, 0.32; respiratory death rate, 1.44; and infant mortality rate, 10.06 per 1,000 births.

Of the total deaths registered (359), 162 were of children under 1 year; and 38 persons of 65 years and upwards. Phthisis caused 29, respiratory diseases 37, heart disease 24, and zymotic diseases 46 deaths, (measles, 16; scarlet fever, 1; whooping cough, 6; diphtheria and membranous croup, 2; enteric fever, 9; continued fever, 2; and diarrhoea, 10). There were 12 premature births. One hundred and thirty-two cases of infectious disease were notified, classified as follows:—Membranous croup, 2; erysipelas, 26; scarlet fever, 49; enteric fever, 48; continued fever, 4; and puerperal fever, 3. Measles, diarrhoea, and influenza, were all prevalent in the district.

The medical officer in his report, which as usual is a very full and comprehensive one, subdivides his district into 7 localities, giving for each locality the population, number of deaths, and death rate, and also the Zymotic, Phthisis, and Respiratory death rates, and the infant mortality rate. As I have repeatedly pointed out, this is a most valuable method of dealing with the statistical information of any sanitary district, since it shows at a glance, in which localities the different death rates are abnormally high; it is satisfactory to note that an increasing number of medical officers of health adopt this plan, which adds very materially to the value of their annual reports.

Localities.	Population.	Number of Deaths.	Death rate.	Zymotic Death rate.	Phthisis Death rate.	Respiratory Death rate.	Infant Mortality rate per 1,000 births.
Waterloo ...	4760	78	16.38	1.68	2.10	1.68	143.61
Cowpen Quay...	5635	125	22.18	3.01	0.88	1.77	258.19
Isabella Pit, Cowpen } Colliery, Newsham } Freeholds }	2730	53	19.41	1.46	2.56	1.83	200.00
Crofton ...	1075	17	15.81	1.86	Nil	1.86	187.50
Hodgson's Mill, } Buck's Hill, } Cowpen Square, } North Pit }	700	16	22.85	2.85	2.85	2.85	96.77
Kitty Brewster, } Farms, and }	1600	45	28.12	6.87	1.87	5.00	269.23
Cowpen Village } Bebside Colliery } and }	1800	25	13.88	1.11	1.11	1.11	146.66
Ironworks }							

For the year under consideration (1900), the water supply has been from the same sources as before; viz:—Healey Wood, and the Coleburn, (assisted during dry weather by the reservoir at Hazelden). An increased supply has been obtained by laying a new main from Hazelden to the water-works. The medical officer points out, that the purity of the water forming the Coleburn, is not improved by passing through two duck ponds at Golrurum, and Clifton.

Improvements. Several new houses have been built. The water supply has been improved through laying about $3\frac{1}{2}$ miles of water main, including a nine inch pipe from Holding Wood, to Bebside; a considerable number

of connections with water mains were made, so as to carry water into private premises. The pollution of the Red House burn by sewage was obviated, by the construction of sewage disposal works. More than four hundred lineal yards of new sewers were laid; seven ventilating man-holes, and 2 flushing chambers were constructed. Very careful gagings were taken throughout the year of the flow of water in the Swilder burn, with a view of obtaining from this source an increased water supply for the district. Two or three insanitary privy ashpits were abolished. The scavenging of Newsham was to some extent improved.

Requirements. A greatly improved water supply, is urgently needed. A steam disinfecter is required at the isolation hospital. Many badly-constructed privy ashpits should be replaced by a better system for the disposal of excrement and refuse. Several improvements in the drainage, and scavenging of some portions of the district, are urgently required.

* The death rate is reduced to 19.12, if 8 deaths from accidents, and 1 suicide are deducted.

CRAMLINGTON.

Medical Officer of Health—ROBERT ANDERSON, M.D.

Area, 3,583 acres; Estimated population, 6,700; Birth rate, 31.49; Death rate, 15.67; Zymotic death rate, 2.68; Infant mortality rate (per 1,000 births), 165.87; Phthisis death rate, 0.59; Death rate from respiratory diseases, 4.92.

Of the above rates, the Birth, General Death, and Respiratory death rates, have all increased by 6.03; 0.67; and 2.86 respectively; the Zymotic and Phthisis death rates have decreased, the former by 1.03, and the latter by 0.09. The Infant mortality rate shows the enormous decrease of 50.34 per 1,000 births.

Of the total deaths (105), 55 were males, and 50 females; 35 were of children under 12 months, and 25 of persons 65 years and upwards. The seven principal zymotic diseases caused 18 deaths as follows:—(measles, 3; scarlet fever, 1; whooping cough, 1; diphtheria and membranous croup, 1; and diarrhoea, 12). Four deaths resulted from Phthisis, being a decrease of 1 over the previous year. Seventy-three cases of infectious disease were notified, classified as follows:—Diphtheria, 2; erysipelas, 12; scarlet fever, 51; enteric fever, 7; and continued fever, 1.

Scarlet fever was present during the greater part of the year. Of the 51 cases notified, 13 were from East Cramlington, 9 from South Cramlington, 20 from West Cramlington, and 9 from Cramlington Village, High Pit, and Shankhouse.

A severe outbreak of measles occurred at West Cramlington, during September, and October; and at Cramlington Village during October, necessitating school closure at each place.

The Medical Officer of Health sub-divides his district, as follows:—Shankhouse, Cramlington Village, East Cramlington, West Cramlington, High Pit Terrace, etc., and South Cramlington.

Improvements. Several nuisances, arising from defective drainage, have been remedied, and the general sanitary conditions of the district has to some extent been advanced.

Requirements. The medical officer's report should be printed. Bye-laws should be framed, and regulations under the Cow-sheds, Dairies and Milk-shops Order, adopted. A steam disinfecter is required. All privy-ashpits should be abolished, and in the meantime emptied weekly. Attention is needed to the ventilation of sewers, and to the proper gradients being maintained, as, owing to subsidences from mining operations, they are liable to become sources of serious danger.

EARSDON.

Medical Officer of Health—TAYLOR DIXON, M.B., B.S., Durham.

Area, 4,711 acres; Estimated population, 9,049; Birth rate, 35.58; Death rate, 15.36; Zymotic death rate, 1.43; Infant mortality rate (per 1,000 births), 161.49; Phthisis death rate, 0.77; Death rate from respiratory diseases, 2.87.

The Birth rate, and the Respiratory death rate have both increased, the former by 3.21, and the latter by 1.18; the remaining rates have all decreased as follows:—General death rate, 2.18; Zymotic death rate, 1.28; Infant mortality rate, 83.26; and Phthisis death rate, 0.70.

Of the total deaths (139), 52 were of children under 1 year, and 16 of persons 65 years and upwards. Zymotic diseases caused 13, phthisis 7, respiratory diseases, 26, and heart disease 13 deaths; there were 11 premature births. The deaths from Zymotic diseases are classified as follows:—Measles, 1; scarlet fever, 2; whooping cough, 1; and diarrhoea, 9. Eighty-seven cases of infectious disease were notified, as follows:—Erysipelas, 19, scarlet fever 62, enteric fever 2, and puerperal fever, 4.

The Medical Officer of Health subdivides his district into four localities, and in addition to giving all possible information in the four tables, which now take the place of Forms A and B, furnishes some additional tables, of considerable statistical interest and value, having reference to the various diseases, deaths, and death rates, which obtained for each locality of this sanitary district.

Localities.	Population.	Number of deaths.	Death rate.	Zymotic Death rate.	Phthisis Death rate.	Respiratory Death rate.	Infant Mortality rate per 1,000 births.
Earsdon	2550	48	18.82	1.56	1.17	3.92	170.94
Backworth	2397	30	12.51	1.66	0.83	1.25	140.00
Holywell	3252	46	14.14	0.92	0.61	3.99	174.31
Murton	850	15	17.64	2.35	Nil	Nil	130.43
Whole district ...	9049	139	63.11	6.49	2.61	9.16	615.68

Of the 62 cases of scarlet fever notified, 14 occurred in the Earsdon sub-division, 28 in Backworth, and 20 in Holywell; two proved fatal, one at Backworth, and one at Holywell.

Measles was very prevalent in August, and September, especially in the Earsdon, and Backworth sub-divisions, necessitating the closure of the Earsdon Parochial School, for 3 weeks.

Improvements. The whole of the district, with the exception of Holywell Village, and Holywell Grange Farms, is now supplied with Whittle Dene water. Water mains have been laid up the back of Hedley's Buildings, and to the new estate at Shiremoor. Sewers have been laid to the new houses built in Earsdon, and also from New York to the new building estate, near the East end of the village. The sewer at the back of Jubilee Terrace, Holywell, has been much improved, and from Philadelphia to the East end of Murton Village, a 12 inch sewer has been laid. The scavenging at B. Pit, and at C. Pit, has been carried out much more thoroughly. The houses at West Holywell have been improved, and privies and ashpits built at B. Pit, Backworth. A number of houses at Whitley Row, Shiremoor, and at C. Pit, Backworth, have been re-roofed. A number of roads and footpaths have been put in order, and the general sanitary condition of the district has improved.

Requirements. A better water supply for Holywell village, and Grange farms. Considerable alterations are required at the Earsdon irrigation ground, at which place the treatment of sewage is most unsatisfactory. Many of the gullies at Shiremoor require to be trapped, and the open channel at C. Pit Backworth, to which attention has been previously drawn, still exists. The practice of wheeling manure through the houses at Backworth should be stopped. At the new estate to the east of New York village, some of the houses are being occupied before the completion of the estate sewer. Attention to many privies and ashpits in a dilapidated condition at Shiremoor Colliery, and at New York. A better system of scavenging at Earsdon Square, and Shiremoor Colliery. Regulations under the Dairies, Cow-sheds, and Milk-shops Order should be adopted. Further attention to the roads, some of which are almost impassible in bad weather.

GOSFORTH.

Medical Officer of Health—W. GALBRAITH, L.R.C.P., L.R.C.S.

Area, 1304 acres; Estimated population, 8,500; Birth rate, 33.58; Death rate, *15.07; Zymotic death rate, 1.17; Infant mortality rate (per 1,000 births), 167.25; Phthisis death rate, **1.29; Death rate from Respiratory Diseases, ***1.64.

Of the above rates, the Zymotic death rate has decreased by 0.24, the remainder have all increased as follows:—General death, 2.25; Birth, 8.88; Phthisis, 0.59; and Respiratory, 0.03; the Infant Mortality rate shows the substantial increase of 29.16. One hundred and eighty-eight deaths occurred in the District during the year, but of this number 55 occurred in Coxlodge Asylum, and 5 in the Chadwick, Ashburton, and Cripples Home, leaving a total of 128 on which these statistics are based. Forty-seven deaths occurred in children under one year, and 17 at 65 years and upwards; Zymotic diseases caused 10 deaths, classified as follows:—Scarlet fever, 1; diphtheria and membranous croup, 2; measles, 4; diarrhoea, 1; and whooping cough, 2. Phthisis caused 11, heart disease 10, and respiratory diseases 14 deaths. The total number of cases of infectious disease notified was 26, as follows:—Diphtheria, 1; membranous croup, 1; erysipelas, 2; scarlet fever, 20; and enteric fever, 2. In addition to these 10 cases of scarlet fever were notified from the Chadwick Home. Owing to an epidemic of measles at East Gosforth, the school was promptly closed for a month, and thoroughly disinfected.

Improvements. During the year over 145 new houses have been built, and 38 are being erected. Nuisances consisting of faulty drains, overflowing ashpits, etc., have been abated. A proper systematic cleansing of ashpits, is now general throughout the district.

Requirements. Many of the streets and back lanes are badly constructed, while the scavenging of the same is far from satisfactory. An Isolation Hospital, steam disinfectant, and Refuse Destructor should be immediately provided.

* The death rate is increased to 22.11 if 60 deaths occurring in public institutions are added.

** 2.82 if 12 deaths occurring in public institutions are added.

*** 1.88 if 2 deaths occurring in public institutions are added.

HEXHAM.

Medical Officer of Health—D. JACKSON, M.D.

Area, 5,130 acres; Estimated population, 7,000; Birth rate, 25.28; Death rate, 20.28; Zymotic death rate, 2.28; Infant mortality rate (per 1,000 births), 163.84; Phthisis death rate, 2; Death rate from respiratory diseases, 2.57.

One hundred and seventy-seven births were registered, of which 88 were males, and 89 females, giving a birth rate of 1.57 lower than in the previous year; the general death, and the zymotic, and respiratory

death rates have increased by 2.14, 0.86, and 0.15 respectively, while the Phthisis death rate, and Infant mortality rate have decreased, the former by 0.14, and the latter by 1.05.

One hundred and forty-two deaths were registered, 29 were children under 1 year, and 34 persons of 65 and upwards. Zymotic diseases caused 16, Phthisis 14 (a decrease of 1), Respiratory diseases 18, and Heart disease 26 deaths. 494 cases of infectious disease were notified, as follows:—Measles (not notifiable in other districts), 429; scarlet fever, 19; erysipelas, 9; whooping cough, 10; enteric or typhoid fever, 3; diphtheria, 2; and typhus fever, 22; the number of cases notified during the previous year was 132.

For the first time since the formation of the sanitary authority, or in the experience of any of the medical practitioners of the town, Typhus fever has occurred in Hexham, a nest of ten cases, being unexpectedly found in one house; fortunately the Council had a fairly complete Isolation Hospital, which proved to be of the greatest possible value; 22 cases in all occurred, resulting in 4 deaths.

Improvements. New water mains to the extent of 2,457 yards have been laid; also 697 yards of new sewers. Shops, stables, warehouses, and 38 dwelling houses have been erected; 352 nuisances have been dealt with; 2 lots of unsound meat were detected, and destroyed, and 13 tenements condemned.

Requirements. Public slaughter houses; improvements in and better supervision over the Lodging Houses; Public Baths, and Wash-houses, should be provided near the more thickly populated parts of the town. A steam disinfecter is required.

MORPETH.

Medical Officer of Health—H DICKIE, M.A., M.B., C.M.

Area, 323 acres; Estimated population, 5,676; Birth rate, 35.23; Death rate, *26.25; Zymotic death rate, 1.93; Infant mortality rate (per 1,000 births), 140.00; Phthisis death rate, 1.58; Death rate from respiratory diseases, 3.34.

The Birth, General Death, and Respiratory death rates have increased by 0.99; 5.39; and 0.67, respectively; the Zymotic, and Phthisis death rates have decreased, the former by 1.10, and the latter by 0.38; the Infant Mortality rate shows the substantial decrease of 31.87 per 1,000 births. One hundred and forty-nine deaths were registered in the district; of these 28 were of children under 1 year, and 47 of persons 65 years of age and upwards; Heart disease caused 16 deaths; Respiratory diseases, 19; Phthisis, 9; and Zymotic diseases, 11; the latter are classified as follows:—Measles, 4; whooping cough, 1; enteric fever, 2; and diarrhoea, 4. Fifteen cases of infectious disease were notified:—diphtheria, 2; erysipelas, 6; scarlet fever, 1; and enteric fever, 6.

The Medical Officer of Health draws attention to the decrease of the death rate from Phthisis, and urges that even greater progress would be made if the Urban District Council would sanction the disinfection of houses, in which there have been cases of Phthisis.

Improvements. New houses have been built in the district; and many minor sanitary alterations have been effected.

Requirements. A steam disinfecter and ambulance. Public slaughter houses. Regulations under the Dairies, Cow-sheds and Milk-shops Order. A cattle market. Additional houses for artisans. Connection of drains to existing sewers. Completion of the sewerage scheme.

* 22.55 if 21 deaths occurring in public institutions are deducted.

NEWBIGGIN-BY-THE-SEA.

Medical Officer of Health, J. CUNNINGHAM, L.R.C.P., L.R.C.S., L.M.

Area, 337 acres; Estimated population, **2,535; Birth rate, 29.58; Death rate, *11.83; Zymotic death rate, nil; Infant mortality rate (per 1,000 births), 93.33; Phthisis death rate, 1.97; Death rate from Respiratory Diseases, nil.

Seventy-five births were registered, 37 males, and 38 females, giving a birth rate of 29.58, a decrease of 1.34 compared with the rate for 1899. The general death rate, Zymotic death rate, Infant Mortality, and Respiratory death rates have all decreased by 1.42; 2.81; 62.51; and 2.00 respectively; the Phthisis death rate has increased by 1.57.

Of the total deaths (30), 17 were males, and 13 females, 7 were of children under 1 year, and 9 of persons 65 years and upwards. There were no deaths from Zymotic or Respiratory diseases. Two cases of infectious disease were notified, viz: 1 of scarlet fever, and 1 of puerperal fever.

Improvements. The scavenging of the district has greatly improved; and the roads are frequently watered during the summer months. The sewerage at Sea View and Sea View Lane, has been improved; the low-lying ground behind Seaton Avenue, generally full of stagnant water, has been drained; the main steps to the Beach have been renewed; old cess-pits at West Cliff have been abolished; at Walker Terrace, and High House, High Street, the house drainage has been improved. The report of the Medical Officer of Health has been printed.

Requirements. The most urgent requirement of this district is a constant and abundant supply of pure water. With the exception of a few private wells, the whole of Newbiggin village is dependent upon three public wells, which furnish a totally inadequate supply. The water has to be carried, in many instances, long distances, and in summer the quantity available is frequently reduced to a considerable extent. It is a well known fact that very large numbers of visitors, and would-be residents, give Newbiggin the go-by, simply on account of its wretched water supply. An isolation hospital is required for this district, either separately or in conjunction with some other sanitary authority. The ancient bye-laws should be revised and brought up to present day requirements. Regulations under the Dairies, Cow-sheds, and Milk-shops Order, should be adopted.

* The death rate is reduced to 10.65 if 3 deaths resulting from accidents are deducted.

** The population during the summer months was augmented by the influx of about 500 visitors.

NEWBURN.

Medical Officer of Health—A. W. MESSER, M.B., C.M., B.Sc.

Area, 4,803 acres; Estimated population, 9,871; Birth rate, 40.21; Death rate, *21.17; Zymotic death rate, 5.57; Infant mortality rate (per 1,000 births), 209.06; Phthisis death rate, 1.41; Death rate from Respiratory Diseases, 3.03.

All the above rates show an increase over those for the previous year, as follows:—General death rate, 5.80; Zymotic, 1.89; Respiratory, 0.17; Phthisis, 0.80; Infant Mortality rate, 45.13; and Birth rate, 2.71.

Two hundred and nine deaths were registered throughout the district; of these 83 were of children under 1 year, and 25 persons of 65 years and upwards. Phthisis caused 14, Respiratory diseases 30, Heart disease 13, and Zymotic diseases 55 deaths; the latter are classified as follows:—Measles 6, scarlet fever 2, whooping cough 11, diphtheria and membranous croup 5, enteric fever 6, and diarrhoea 25; ten premature births were registered.

The Medical Officer of Health subdivides his district as shown in the following valuable table:—

Localities.	Population	Number of Deaths.	Death rate.	Zymotic Death rate.	Phthisis Death rate.	Respiratory Death rate.	Infant Mortality Rate per 1,000 births.
Newburn ...	2095	40	19.09	5.25	0.47	3.34	No information.
Sugley and Newburn) Hail ...)	3034	53	17.46	3.29	1.97	2.63	
East Denton ...) West Denton...)	1588	39	24.55	4.40	1.25	3.78	
Throckley ...	1707	43	25.19	8.78	1.75	2.34	
Walbottle ...	1424	34	23.87	8.42	1.40	3.51	

The Medical Officer also gives some very valuable information under Zymotic diseases grouped together, and under each of the Zymotic diseases, as to the number of cases notified, and the locality in which they occurred; also a table dealing similarly with "other respiratory diseases"—Bronchitis, Pneumonia, and Pleurisy.

Information of this kind very materially enhances the value of an annual report.

One hundred and sixty-two cases of infectious disease were notified, classified as follows:—Diphtheria, 75; erysipelas, 26; scarlet fever, 32; enteric fever, 27; puerperal fever, 2.

Improvements. Most of the old property in the district has been demolished, and new houses are being erected in large numbers. Bye-laws were drawn up and forwarded to the Local Government Board for approval.

Requirements. An Isolation Hospital and steam disinfectory; a satisfactory sewerage scheme for Westerhope.

* After deducting 6 deaths from accidents, and 1 from suicide, the death rate is reduced to 20.46.

ROTHBURY.

Medical Officer of Health, F. BARROW, M.R.C.S., L.S.A.

Area, 948 acres; Estimated population, 1,200; Birth rate, 30.83; Death rate, *24.16; Zymotic death rate, 5.00; Infant mortality rate (per 1,000 births), 108.10; Phthisis death rate, 2.50; Death rate from Respiratory Diseases, 2.50.

All the above rates are higher than those for the previous year, the increase in each case being as follows:—Birth rate, 13.33; Death rate, 5.83; Zymotic death rate, 4.17; Infant Mortality rate, 12.87; Phthisis death rate, 1.67; and death rate from Respiratory Diseases, 0.84.

Of the total deaths (29), 4 were of children under 1 year, and 9 of persons 65 and upwards. Zymotic diseases caused 6 (scarlet fever 3, and whooping cough 3), Phthisis 3, Respiratory diseases 3, and Heart disease 6 deaths. Twenty-three cases of infectious disease were notified during the year, as follows:—Erysipelas 4, and scarlet fever, 19; three patients suffering from the latter disease were removed to the hospital. Measles was prevalent in May, June, and July, and the district was not free from this disease until December; there were, in all, 41 cases, but no deaths. The Scarlet Fever outbreak, extended throughout the greater part of the year, 19 cases were notified, 10 being under, and 9 over 5 years of age; the cases occurred in 15 different houses.

Improvements. At South Terrace the sewer has been extended, and 4 new houses with all sanitary arrangements have been erected; new houses have also been built at the head of the town, and the wretched old railway

station has been replaced by a neat and commodious structure with sanitary conveniences. Henderson's slaughter house has been removed, and both his and Nichol's middens (which were used for the reception of offal), have been better kept. Nuisances have been rectified at Drysdale's cow-shed, and at the County Hotel. The water supply taken from a spring at the side of Simonside Hill, is a soft water, perfectly pure, and a constant service.

Requirements. The main North sewer requires attention; ventilation is also required for that on the south side, in the Matting Yard; the drain at Whitton Crescent is faulty. At South Terrace Cottages very unsanitary conditions still exist; public slaughter houses should be provided; scavenging should be carried out by the sanitary authority and at shorter intervals than has been the custom heretofore. The midden at the Lodging House in particular requires better attention. Privy ashpits should be abolished.

* The death rate is reduced to 22.50 if the deaths of 2 visitors to the district are deducted.

SEGHILL.

Medical Officer of Health—R. ANDERSON, M.D.

Area, 1,425 acres; Estimated population, 2,400; Birth rate, 32.08; Death rate, *18.75; Zymotic death rate, 0.83; Infant mortality rate (per 1,000 births), 116.88; Phthisis death rate, 2.08; Death rate from Respiratory Diseases, 4.58.

The birth rate has increased by 0.35; the death rate has decreased by 3.42; the Zymotic and Respiratory death rates have also decreased, the former by 0.03, and the latter by 0.20; the Phthisis death rate has increased by 0.78, and the Infant mortality rate shows the enormous decrease of 225.58 per 1,000 births.

Of the total deaths (45), 25 were males, and 20 females; 9 were children under 1 year, (a decrease of 16 compared with the number for the previous year), and 9 were of persons 65 years and upwards. Two deaths occurred from Zymotic disease (scarlet fever); Phthisis caused 5, Respiratory diseases 11, Heart disease 4, and Premature Birth 5 deaths. The cases of infectious disease notified numbered 20, classified as follows:—Scarlet fever 18, and Enteric or Typhoid fever 2.

The outbreak of scarlet fever first occurred in February, in Seghill Village, and continued throughout the year.

Improvements. The general sanitary condition of the district has been greatly improved by the introduction of the ash closet system, these being regularly and well attended to.

Requirements. The whole of the sewer which passes near Backworth Cottages (where Enteric fever occurred), should be piped-in. Adoption of regulations under the Cow-sheds, Dairies, and Milk-shops Order. A steam disinfecter. Framing of Bye-laws.

* 17.91 if 2 deaths from accidents are deducted.

TYNEMOUTH.

Medical Officer of Health—J. E. GOFTON, L.R.C.P., M.R.C.S.

Area, 4,250 acres; Estimated population, 54,070; Birth rate, 30.49; Death rate, *19.86; Zymotic death rate, 1.92; Infant mortality rate (per 1,000 births), 155.24; Phthisis death rate, 1.57; Death rate from Respiratory Diseases, 2.78.

Of the above rates only the general death rate shows an increase over that for the previous year, the increase being 0.25; the remainder have all decreased as follows:—Birth rate 0.55, Zymotic death rate 0.54, In-

fant mortality rate 0.85, Phthisis death rate 0.30, and Respiratory death rate 0.05. Of the total deaths (1,074), 256 were of children under 1 year, and 224 of persons 65 years of age and upwards. Zymotic diseases caused 104 (measles 46, scarlet fever 15, whooping cough 9, diphtheria and membranous croup 9, enteric fever 10, and diarrhoea 15); phthisis caused 85 deaths (a decrease of 14), respiratory diseases 151, heart disease 98, and accidents 34; there were also 23 premature births registered. Three hundred and sixty-six cases of infectious disease were notified, classified as follows:—Smallpox 1, diphtheria 17, membranous croup 4, erysipelas 83, scarlet fever 238, enteric fever 21, and puerperal fever 2. Of these cases, 117, occurred in children under 5 years. Owing to the outbreak of measles (which was very prevalent), the Infant Department of the Priory Schools was closed for a time.

The Medical Officer of Health subdivides his district into six localities, and gives the following valuable and interesting table:—

Localities.	Population.	Number of Deaths.	Death rate.	Zymotic Death rate.	Phthisis Death rate.	Respiratory Death rate.	Infant Mortality rate per 1,000 births.
Tynemouth Township	22382	461	20.59	1.83	1.56	3.03	139.75
Tynemouth Village ...	4616	41	8.88	0.21	0.43	0.21	73.17
Cullercoats Township	2025	34	16.79	1.97	1.97	2.96	173.91
North Shields Township	5575	191	34.26	3.94	3.22	5.73	238.09
Chirton Township ...	15968	300	18.78	1.94	1.37	2.50	167.65
Preston Township ...	3504	47	13.41	1.42	1.14	1.14	116.27

Improvements. A considerable amount of property has been acquired (with the view of carrying out an improvement scheme) in Bell Street, and Liddell Street. Over 300 nuisances have been abated, amongst which are cases of overcrowding; houses, etc., with structural defects or unfit for human habitation; animals improperly kept. Disinfection of houses after infectious disease, has been carried out by the sanitary authority. A new ambulance has been ordered.

Requirements. Artizans dwellings are urgently needed. Many houses e. g., Low Street, for the greater part of its length—are insanitary, dilapidated, and unfit for human habitation. An isolation hospital and steam disinfector are urgently required; also a refuse destructor.

* If the deaths of 65 persons occurring in public institutions, but not belonging to the district are added, and 24 belonging to, but occurring in public institutions outside the district are deducted, the death rate is increased to 20.62.

WALKER.

Medical Officer of Health—F. N. GRINLING, M.R.C.S., Eng., L.R.C.P., Lon.

Area, 1,157 acres; Estimated population, 14,000; Birth rate, 36.35; Death rate, *20.50; Zymotic death rate, 2.71; Infant mortality rate (per 1,000 births), 180.74; Phthisis death rate, 1.64; Death rate from Respiratory Diseases, 3.57.

Of the above, the Birth rate and the Zymotic death rate have decreased, the former by 1.72, and the latter by 0.99; the General death, Phthisis, Respiratory, and Infant Mortality rates, have all increased, by 1.32, 0.31, 0.91, and 11.48, respectively.

The Medical Officer of Health calls attention to the increasing number of uncertified deaths, particularly of infants.

Of the total deaths (287), 92 were of children under 1 year; Zymotic diseases caused 38; Phthisis 23, Respiratory diseases 50, Heart disease 18, Premature birth 12, and accidents 11 deaths. The deaths from Zymotic

disease are classified as follows:—Measles 17, scarlet fever 3, whooping cough 3, diphtheria and membranous croup 4, enteric or typhoid fever 2, and diarrhoea 9. In all, 174 cases of infectious disease were notified, viz:—Diphtheria 16, membranous croup 4, erysipelas 19, scarlet fever 127, enteric or typhoid fever 7, and puerperal fever 1.

The large number of cases of scarlet fever (127) were distributed throughout the year, but the disease was more prevalent during the latter half; they were generally of a mild type, resulting in only 3 deaths. In all cases the houses were visited, disinfectants were supplied, and isolation insisted upon, with subsequent disinfection by the sanitary inspectors; where isolation was impossible, cases were removed to the Hospital.

An epidemic of Measles occurred during the latter part of the year, resulting in 17 deaths, all children under 5 years of age.

Improvements. Many ashpits and middens have been abolished, and ash closets substituted; new houses have been erected but not sufficient to meet the demand. The Council have resolved, in future, to disinfect houses after cases of death or removal of persons suffering from Phthisis. A large number of nuisances have been rectified.

Requirements. More houses for the weekly wage class; many of the older buildings require attention, both as to construction and repair. The abolition of all ashpits and middens, and the substitution of ash closets. Some of the cow-sheds in the district require structural attention. The Medical Officer of Health again calls attention to the increasing difficulty in the disposal of ashpit refuse on the land, and the danger arising therefrom to the public health, and strongly urges the erection of a refuse destructor.

* If the deaths of 35 non-residents occurring in public institutions are added, the death rate is increased to 23.00.

If 11 deaths resulting from accidents are deducted, the death rate is reduced to 19.71.

WALLSEND.

Medical Officer of Health—THOS. WILSON, L.R.C.P., M.R.C.S.

Area, 1,202 acres; Estimated population, 21,000; Birth rate, 35.61; Death rate, *14.42; Zymotic death rate, 2.38; Infant mortality rate (per 1,000 births), 129.67; Phthisis death rate, 0.95; Death rate from Respiratory Diseases, 2.00.

Seven hundred and forty-eight births (360 males, and 388 females) were registered during the year; the birth rate has increased by 0.86; all the other rates have decreased, as follows:—General death, 3.48; Zymotic, 0.77; Phthisis, 0.05; Respiratory death rate, 0.30; Infant Mortality rate, 66.01 per 1,000 births.

Of the three hundred and three deaths, 12 were strangers, belonging to other districts; 97 were of children under 1 year, and 25 of persons over 65 years of age. Zymotic diseases caused 50 deaths, Phthisis 20 (same as last year), Respiratory diseases 42, Heart disease 14, premature birth 40, and accidents 13. The deaths from Zymotic disease were classified as follows:—Measles 9, scarlet fever 9, whooping cough 16, diphtheria and membranous croup 1, enteric or typhoid fever 4, and diarrhoea 11. The cases of infectious disease notified numbered 139, as follows:—Diphtheria 10, erysipelas 16, scarlet fever (mostly mild) 90, enteric or typhoid fever 21, and puerperal fever 2. Of these cases, 22 were removed to the Hospital.

The Medical Officer of Health, speaking of the outbreak of scarlet fever says:—"There have been no deaths from the cases that have been sent to the Hospital. I regret that the public do not half appreciate the advantages derived from the above-mentioned place."

Improvements. The old ashpits are now emptied every week, instead of every 3 weeks as formerly; nearly 150 nuisances have been rectified;

265 new drains have been inspected, tested and passed; 35 old ashpits have been converted into ash closets; insanitary property has been put right. New bye-laws are in force.

Requirements. The abolition of more than 500 ashpits still existing in the district; a steam disinfectant at the Hospital.

* 13.23 if the deaths of 12 strangers and 13 resulting from accidental causes are deducted.

WEETSLADE.

Medical Officer of Health, ALLAN WALKER, M.B., C.M.

Area, 2,257 acres; Estimated population, 5,000; Birth rate, 44.20; Death rate, *22.60; Zymotic death rate, 1.00; Infant mortality rate (per 1,000 births), 235.29; Phthisis death rate, 0.80; Death rate from Respiratory Diseases, 2.60.

Two hundred and twenty-one births (102 males, and 119 females) were registered during the year.

The General death rate, and the Zymotic, and Respiratory death rates, all show a decrease, by 2.69, 0.16, and 2.27 respectively. The Phthisis death rate has increased by 0.11; the Infant Mortality rate (per 1,000 births) shows a decrease of 14.71.

Of the total deaths (113), 52 were of children under 1 year, and 17 were of persons 60 years and upwards. Zymotic diseases caused 5 deaths; Respiratory diseases, 13; Heart disease, 8; Premature birth, 2; and Phthisis, 4. Thirty-seven cases of infectious disease were notified, as follows:—Diphtheria, 2; Erysipelas, 7; Scarlet fever, 26; and Enteric or Typhoid fever, 2; these returns were made from the following sub-districts:—Dudley 30; Annitsford 3; Seaton Burn 4. A slight epidemic of measles prevailed during the month of May, causing 3 deaths. Bronchitis and Broncho-Pneumonia were very prevalent, among children under 5 years of age.

Improvements. Improved buildings are being erected at Seaton Burn, Annitsford, and Dudley; Whittle Dene water has been laid on to Seaton Burn.

Requirements. Attention to the sewerage at Wideopen, which is in a most unsatisfactory condition. The irrigation ground should be under the direction of the sanitary authority. Substitution of ash closets for privy ashpits, a large number of the latter being constructed in the most insanitary manner possible, and are a constant source of pollution of the ground, and the air, with the products of decomposition. An isolation hospital, and disinfectant, are required for this populous district.

* 21.60 if 3 deaths from accidents and 2 suicides are deducted.

WHITLEY AND MONKSEATON.

Medical Officer of Health, The late P. ALEXANDER, L.R.C.P., L.R.C.S., L.M.

Area, 1,540 acres; Estimated population, *9,165; Birth rate, 16.47; Death rate, **10.36; Zymotic death rate, 0.76; Infant mortality rate (per 1,000 births), 112.58; Phthisis death rate, 0.65; Death rate from Respiratory Diseases, 0.87.

The death of the late medical officer of health (Dr. Alexander) took place early in the year, and a protracted but fruitless search was made for any papers, containing information, statistical or otherwise, which would make it possible to calculate the different mortality rates, etc., etc., for this sanitary district.

The county medical officer of health considered it advisable to obtain what particulars he could, relating to births, deaths, cases of infectious diseases notified, death rates from different causes, age periods at which such deaths occurred, the localities from which such cases of infectious diseases were notified, and in which the deaths took place, as without

this information, no annual report whatever could be issued for this sanitary district, and consequently no county rates could be calculated. In making this search, which necessarily occupied a considerable time, the county medical officer was very materially assisted by Mr. Whitehorn (Clerk), by Mr. Wood (Registrar), and by the Sanitary Inspector (Mr. Martin), to all of whom he tenders his hearty thanks for their help.

All the above rates show a decrease compared with those for the previous year as follows:—Birth rate 1.29; Death rate 0.84; Zymotic death rate 0.65; Infant Mortality rate 39.59; Phthisis death rate 0.26; and Respiratory death rate 0.28. Of the total deaths (95), 85 occurred in Whitley, and 10 in Monkseaton; 17 occurred in children under 1 year, and 24 in persons 65 years of age and upwards. Seven deaths took place from Zymotic disease (Scarlet fever 1; Diphtheria and Membranous Croup 1; Enteric fever 1; and Diarrhoea 4). Phthisis caused 6, and Heart disease 11 deaths. Twenty-six cases of infectious disease were notified, of which 16 were returned from Whitley, and 10 from Monkseaton.

Improvements. About 300 new houses were built during the year. About $1\frac{1}{4}$ miles of new sewers were laid.

Requirements. A much more satisfactory water supply is urgently needed. Isolation Hospital, and Steam Disinfector. Alterations are required as to the position, condition and licensing of many of the slaughter-houses.

*owing to the influx of visitors, the population during the summer months is increased to over 12000.

** 10.03 if 2 deaths from accidental causes and 1 suicide are deducted.

WILLINGTON QUAY.

Medical Officer of Health, C. T. U. BABST, L.R.C.P., L.R.C.S.

Area, 336 acres; Estimated population, 9,700; Birth rate, 28.76; Death rate, *17.42; Zymotic death rate, 2.57; Infant mortality rate (per 1,000 births), 197.13; Phthisis death rate, 0.92; Death rate from Respiratory Diseases, 4.43.

Of the above rates, the Birth rate and the Phthisis death rate have decreased, the former by 5.54, and the latter by 0.04; the General death rate, the Zymotic and Respiratory death rates, and the Infant Mortality rate have all increased, by 0.54; 0.32; 0.13; and 49.80 respectively. Of the total Births (279) 147 were males, and 132 females.

One hundred and sixty-nine deaths were registered during the year, of which 92 were males, and 77 females. Infant Mortality caused 55 deaths; Zymotic diseases 25, Heart disease 11, Phthisis 9, Respiratory diseases 43, and accidents 3 deaths. The deaths from Zymotic diseases are classified as follows:—Measles, 7; Scarlet fever, 3; Whooping Cough, 5; Diphtheria and Membranous Croup, 1; Enteric fever, 1; and Diarrhoea, 8. Eighty-four cases of infectious disease were notified, as follows:—Diphtheria 3; Erysipelas 1; Scarlet Fever 76; and Enteric Fever 4. Twenty-four of these were removed to the Isolation Hospital. Whooping Cough was less prevalent than in the previous year, and only 5 deaths resulted from this cause.

The medical officer has devoted a very considerable amount of time and labour, to dividing his district into localities. Thus a table is furnished, giving the estimated population of all streets (singly, or in groups of 2 or 3), the number of deaths occurring in each street (or group), the death rate per 1,000 for the year 1900, and the mean death rate for the 4 years 1897-1900. From this valuable table it can be readily seen, in which streets the death rate is high, and in which low. In another table he gives the streets from which all the cases of infectious disease have been notified; and referring to an outbreak of Scarlatina, the medical officer gives the number and name of the streets, in which cases occurred,

and also the number of cases notified, during each month. As I have repeatedly pointed out, work of this kind enhances, very materially, the value of an annual report.

Improvements. Many large ash pits have been converted into ash-closets. Some of the old houses at the top of Ravensworth Street have been partially repaired. Regulations under the Dairies, Cow-sheds, and Milk-shops Order were adopted, and confirmed by the Local Government Board. An enquiry was held in October, by one of the Inspectors of the Local Government Board in consequence of an application having been made by the County Council to have the tidal waters of Willington Gut and its tributaries, declared a stream within the meaning of the Rivers Pollution Prevention Act.

Requirements. The reconstruction or demolition of a good deal of house property, some of which is quite unfit for human habitation. A remedy for the Willington Gut Nuisance. The abolition of many badly constructed privy ashpits.

* 17·01 if 3 deaths from accidents and 1 suicide are deducted.

RURAL DISTRICTS.

ALNWICK.

Medical Officer of Health, SCOTT PURVES, M.D.

Area, 89,950 acres; Estimated population, 12,131; Birth rate, 24.97; Death rate, *14.68; Zymotic death rate, 0.49; Infant mortality rate, (per 1,000 births), 118.81; Phthisis death rate, 0.74; Death rate from Respiratory Diseases, 1.81.

All the above rates (with the exception of the Infant Mortality rate, which has increased by 10.31), have decreased as follows:—Birth rate 3.03; General death rate 1.25; Zymotic death rate 0.08; Phthisis death rate 0.08; and Respiratory death rate 0.32. Of the total deaths (178), 36 were of children under 1 year, and 65 of persons 65 years of age and upwards. Zymotic diseases caused 6 deaths, (measles 2, scarlet fever 1, whooping cough 1, and diarrhoea 2); twenty-two persons died from respiratory diseases, 9 from phthisis, 22 from heart disease, and 12 from accidents. Eighty-four cases of infectious disease were notified, classified as follows:—Diphtheria, 3; erysipelas, 6; scarlet fever, 72; and enteric fever, 3. Thirty-three cases occurred in the Warkworth, and fifty-one in the Embleton districts. No cases were notified from the Alnwick district.

The Medical Officer subdivides his district into 3 localities as shown in the valuable table appended.

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1,000 births.
Warkworth	6229	106	17·01	0·80	2·08	0·96	123·71
Embleton	5221	64	12·25	0·19	1·72	0·19	119·56
Alnwick	681	8	11·74	Nil.	Nil.	2·93	58·82

The outbreak of Scarlet fever (72 cases notified, and 1 death), was spread over nearly the whole year, cases being notified in every month except February and September. The Medical Officer again points out that Typhoid Fever appears to be endemic at Togston Terrace; the streets are well drained, and have a good water supply, but the yards are cramped, and narrow, and have privy ashpits close to the back doors.

It was found necessary to close the schools at Shilbottle, and Lesbury, owing to a severe epidemic of measles; and also the school at Craster, owing to infectious disease occurring in the schoolmaster's house.

Improvements. The sewer south of Garden Terrace, Alnmouth, has been relaid; a new sewer has been laid at Radcliffe; other drainage improvements have been effected at the former place, as well as at Bilton Banks, Dunston Square, Edlingham, Felton, Hawk Hill, Littlehoughton, North Togston Hall, Procter Steads, Togston, Titlington farm, Warkworth, Wellhope, West Bolton Buildings, and Christon Bank. The sewage from Glanton village has been piped to a liquifying tank and filters to the west of the Dovecot field, thus abating the long-complained-of nuisance on the Whittingham road. Several nuisances have been abated at Embleton, North Togston Hall cottages, Rennington and Stamford.

The scheme for increasing the water supply for Alnmouth from springs at Snableazes has been completed. Increased supplies have been provided for Acklington High Park and Brotherwick. New water mains have been laid to Hemmel House, Greenville, Northumberland Arms and cottages, (Newton-on-the-Moor), Heather Leazes, near Warkworth, and West Bolton village. Regulations under the Dairies, Cow-sheds, and Milk-shops Order have been adopted, and are in force.

Requirements. An isolation hospital, and steam disinfectory; bye-laws applicable to the whole district; a better water supply for several farms and cottages—Acklington Low Park, Birling North Field, Dean Moor, Glanton North Field, The Greens, Sturton Grange South Side, Middle Cawledge Park, Shipley Lane, and West Cawledge Park.

* 13·68 if 12 deaths from accidents are deducted.

BELFORD.

Medical Officer of Health, J. G. MACASKIE, L.R.C.P., L.R.C.S., D.P.H.

Area, 38,586 acres; Estimated population, 4,631; Birth rate, 27·63; Death rate, *16·19; Zymotic death rate, 1·07; Infant mortality rate (per 1,000 births), 62·50; Phthisis death rate, 1·72; Death rate from Respiratory Diseases, 1·72.

All the above rates show an increase over those for the previous year, as follows:—Birth rate, 2·17; General death rate, 1·86; Zymotic death rate, 0·43; Infant Mortality rate, 3·68; Phthisis death rate, 0·44; Respiratory death rate, 0·44. The number of births recorded during the year was 128, and the total number of deaths 75; of the latter 8 were of children under 1 year, and 38 of persons 65 years and upwards. Heart diseases caused 12 deaths, Phthisis 8, Respiratory diseases 8, and Cancer 6. Four deaths occurred in the Workhouse, all at over 65 years. The 5 deaths from Zymotic diseases are classified as follows:—Scarlet fever, 3; whooping cough, 1; and diphtheria, 1. Seventy-one cases of infectious disease were notified, as follows:—Diphtheria, 1; erysipelas, 8; and scarlet fever, 62.

Scarlet fever, which was prevalent at the end of 1899, continued to break out during the year under consideration; as soon as it was stamped out in one locality, it appeared in another, and so continued throughout the entire year, in spite of all possible precautions being taken. The Medical Officer of Health commenting upon this outbreak says:—"Until each rural district provides itself with an isolation hospital, and a steam disinfectory, it will be most difficult, if not well nigh impossible, to arrest such an outbreak as this."

Improvements. Several important sanitary improvements have been effected; good progress was made with the new drainage scheme for Bamburgh; the drainage at North Sunderland has been much improved, also at Friar's farm, the Manor House and cottages, etc., and Plantation farm. Several houses at Belford have been re-roofed, and in other ways repaired, and several covered-in, and cemented ash pits have been built.

Water closets have been supplied, for the Hermitage and adjoining cottages at Bamburgh, and at the school the old closet system has been abolished, and water closets with automatic flushing cisterns substituted.

Requirements. The abolition of all insanitary privy ash-pits; more frequent scavenging of some portions of the district; regulations under the Dairies, Cow-sheds, and Milk-hops Order; an isolation hospital and steam disinfecter.

* 15.33 after deducting 4 deaths in the Workhouse.

BELLINGHAM.

Medical Officer of Health, J. P. ELLIOT, L.R.C.P., L.R.C.S., L.M.

Area, 238, 201 acres; Estimated population, 6,000; Birth rate, 22.66; Death rate, *16.66; Zymotic death rate, 0.16; Infant mortality rate (per 1,000 births), 102.94; Phthisis death rate, 1.16; Death rate from Respiratory Diseases, 3.50.

The Birth rate, and Phthisis death rate, have both decreased by 2.50 and 0.50 respectively; the General death rate has increased by 2.50, the Zymotic death rate by 0.16, the Respiratory death rate by 2.84, and the Infant mortality rate by 10.23 per 1,000 births. Of the total deaths (100), 14 were of children under 1 year, and 46 of persons 65 years and upwards. One death occurred from Zymotic disease (diarrhoea), 7 from Phthisis, (a decrease of 3), 21 from Respiratory diseases, and 16 from Heart disease. Twenty-six cases of infectious disease were notified as follows:—Diphtheria, 11; erysipelas, 3; and scarlet fever, 12. The cases of Diphtheria were notified from the Bellingham (1), Falstone (1), Elsdon (5), Wark (2), and Kirkwhelpington (2), sub-divisions; the Erysipelas cases from Bellingham (2), and Corsenside (1); and the Scarlet fever cases from Falstone (6), Elsdon (1), Corsenside (2), and Birtley (3).

The Medical Officer of Health sub-divides his district into the following localities:—

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Phthisis death rate.	Respiratory death rate.	Infant Mortality rate per 1000 births.
Bellingham	1268	27	21.29	Nil	Nil	3.15	38.46
Falstone	1100	14	12.72	0.90	Nil	Nil	96.77
Elsdon	1200	10	8.33	Nil	Nil	1.66	142.85
Corsenside	724	20	27.62	Nil	2.76	4.14	190.47
Wark	731	15	20.51	Nil	2.73	6.83	111.11
Birtley	387	4	10.33	Nil	5.16	Nil	Nil
Kirkwhelpington ...	592	10	16.89	Nil	1.68	5.06	66.66

The cases of Scarlet fever occurred throughout the greater part of the year; five of these occurred at Plashetts, which the Medical Officer of Health says, "is usually a hot-bed of epidemics."

Improvements. Several new houses have been built in the district. Considerable improvement has been effected in the condition of Highfield, and Highfield Dod; several damp and dilapidated houses have been put into better order, and a promise has been given that thirty other houses shall be completely overhauled; in order that there may be a proper outlet for the sewage of the latter, the main sewer has been extended.

Requirements. Attention is required to the water supplies for Wark and Bellingham, and to the sewage disposal works at the former place. The county medical officer reported, in July 1899, upon the unsatisfactory condition of these sewage disposal works, and also of the water supply. A better water supply for Birtley, Woodburn East and West, and Plashetts. Improved drainage at Plashetts, and Ridsdale; and at the latter place

spouting for the houses. Attention to several houses on the Momises, Otterburn Hall, Bavaigton, and Greenhaugh estates. The insanitary conditions obtaining at some of these places, have been again and again reported to the District Council. An isolation hospital, and steam disinfectors. The annual report of the Medical Officer of health should be printed.

* The death rate is reduced to 15.00 if 6 deaths occurring in public institutions, and 4 upon which inquests were held, are deducted.

CASTLE WARD.

Medical Officer of Health, G. H. FITZGERALD, M.D.

Area, 85,219 acres; Estimated population, 9,433; Birth rate, 23.64; Death rate, 14.73; Zymotic death rate, 0.84; Infant mortality rate (per 1,000 births), 107.62; Phthisis death rate, 1.80; Death rate from Respiratory diseases, 2.86.

The Birth and Infant Mortality rates have decreased by 0.56, and 14.64 respectively; the General death rate, the Phthisis, and Respiratory death rates, have increased by 1.31, 0.64, and 1.28 respectively. The Zymotic death rate was the same as that for 1899.

The total deaths in the district during the year numbered 139; of these 24 were of children under 1 year, and 60 of persons 65 years and upwards. Zymotic diseases caused 8, (Diphtheria and Membranous Croup, 1; Enteric fever, 2; and diarrhoea, 5); Phthisis caused 17 deaths; Heart diseases, 19; Respiratory diseases, 27; and accidents, 3. Forty-two cases of infectious disease were notified as follows:—Diphtheria, 8; Membranous Croup, 1; Erysipelas, 6; Scarlet fever, 23; and Enteric fever, 4.

The Medical Officer of Health sub-divides his district into 7 localities, as follows:—

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1,000 births.
Heddon-on-the-Wall...	1400	22	15.71	Nil	2.14	3.57	Number of births in each locality not given.
Newburn ...	634	7	11.04	1.57	1.57	1.57	
Stamfordham & Matfen	1292	21	16.25	0.77	0.77	3.86	
Kirkheaton and Kirkwhelpington ...	91	4	43.95	Nil	Nil	Nil	
Gosforth North ...	1473	14	9.50	1.35	1.35	0.67	
Stannington and Whorlton ...	2111	27	12.79	Nil	3.31	0.47	
Ponteland and Dinnington ...	2420	44	18.18	1.65	5.37	1.65	

The schools at Whorlton were closed owing to an epidemic of measles.

Improvements. Satisfactory progress was made during the year with the sewerage scheme for the village of Ponteland; new systems of sewerage were also formulated for Dinnington Colliery, and for Heddon-on-the-Wall; new drainage systems were provided for Dinnington village; Dewlaw farm, Matfen; Brunton Mill, and Preswick Whins farms; Broom Hall, Callerton; and Middle Brunton. At the following places new drains were laid, or the existing drains examined, improved, and put in order:—Whorlton Parsonage; Capheaton New Houses; Black Callerton; North and East Brunton; Horton Grange; Heddon Hall. At Wolsington Hall a septic tank and bacteria beds have been established. An improved water supply has been provided for the following places:—

Little Callerton, Smallburn, Broad Law, North and South Shotton farms, and cottages, Low Newbiggen. At Heddon Mill an oil engine has been provided to pump water to Heddon-on-the-Wall, and Bay Leap farm, when there is not sufficient water to drive the water wheel.

Requirements. A better water supply for Ponteland is much needed. An isolation hospital and steam disinfectors are required for this extensive district. The houses forming Quarry row, Kenton, are unfit for human habitation. A scheme for the proper disposal of the sewage from Bolam tile sheds is required; at present it discharges on to the road side. Drainage is required for the house at Heugh Mill, the slop water, etc., from which pollutes the stream during wet weather. At Butterlaw, sewage flows on to the road side; this should be remedied. Drainage should be provided for the houses at Ryal; one farm drains into a ditch; the slop water, etc., from another farm flows down the road side; for the remaining houses, stables, and cow-sheds, no drainage appears to be provided.

* 13.56 if 6 deaths occurring in public institutions, and 5 of persons not belonging to the district are deducted.

GLENDALE.

Medical Officer of Health, A. DEY, M.B., C.M.

Area, 147,698 acres; Estimated population, 10,156; Birth rate, 16.44; Death rate, *13.98; Zymotic death rate, 0.78; Infant mortality rate (per 1,000 births), 107.78; Phthisis death rate, 0.88; Death rate from Respiratory diseases, 1.87.

Of the above rates the Birth rate and Phthisis death rate have decreased, the former by 1.97, and the latter by 0.40; the General death rate, and the Zymotic, and Respiratory death rates have all increased, by 1.58, 0.59, and 0.40 respectively; the Infant Mortality rate has increased by 22.22 per 1,000 births. The deaths numbered 142; in these are included 18 under one year, and 63 of 65 years and upwards. Eight deaths occurred from the principal Zymotic diseases (Scarlet fever, 1; whooping cough, 3; Diphtheria and Membranous Croup, 2; and Diarrhoea, 2); 9 from Phthisis (a decrease of 4); 19 from Respiratory diseases; and 31 from Heart disease. Thirty-five cases of infectious disease were notified, classified as follows:—Diphtheria 12 (Wooler sub-division); Erysipelas 11 (Wooler 8, Ford 3); Scarlet fever 11 (Wooler); and Continued fever 1 (Ford). The Medical Officer of Health draws attention to the low birth rate (16.44), and points out that the average rate for the district during the past 10 years is 20.8.

He again divides his district as shown in the following table:—

Localities.	Population.	Number of Deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1000 births.
Wooler	5100	83	16.27	1.56	0.98	1.17	111.11
Ford	5033	56	11.12	Nil	2.78	0.59	102.93
Union Workhouse ...	21	3	142.85	—	—	—	—

Measles became epidemic in the southern portion of the district, and also at Chillingham, necessitating the closure of the schools. During the year Dr. Alexander Dey was appointed Medical Officer of Health, in place of Dr. Robert Walker, who resigned.

Improvements. New houses have been built at Wooler, Fowberry Mains, Helton House, Heathery Hall, and Akeld Hill. Houses have been enlarged and improved at Mindrim, Mindrim Mill, Wooler; Castle Heaton,

Thornington, North Doddington, Chillingham Barnes, Barmoor (East Cottages, East Horton, Haugh Head Farm, Routen Linn Farm, Ford Hill, Ford West Field, and Coupland Home Farm. Water supplies have been obtained or improved at Fowberry Moor, Trickle, Thornington, Heathery Hall, and Barmoor. Improved sanitary arrangements have been carried out at Thornington House, Chillingham Barnes Farm House, Cottage Hotel, Ford West Field, Ewart Bridge End. The school house at Branxton has been enlarged, 3 rooms having been added. A few insanitary ashpits have been done away with.

Requirements. A public slaughter house; and the abolition of all large ashpits at Wooler. New water supplies at Hetton House, Heathery Hall, and at Old Lynham; at the latter place the occupants of 6 cottages have to carry their water, uphill, a quarter of a mile. An Isolation Hospital and Steam Disinfector. Regulations under the Dairies, Cow-sheds, and Milk-shops Order, applicable to the whole district.

*13.58 after deducting 1 death from accidents, and 3 deaths in public institutions.

HALTWHISTLE.

Medical Officer of Health, R. BOUSTEAD, L.R.C.P., L.R.C.S., D.P.H., L.M.

Area, 96,333 acres; Estimated population, 8,481; Birth rate, 28.53; Death rate, *16.38; Zymotic death rate, 0.82; Infant mortality rate (per 1,000 births), 107.43; Phthisis death rate, 1.06; Death rate from Respiratory diseases, 1.53.

All the above rates show an increase over those for the previous year, the increase in each case being as follows:—Birth rate, 0.60; Death rate, 4.57; Zymotic death rate, 0.23; Infant Mortality rate, 9.14; Phthisis death rate, 0.35; and Respiratory death rate, 0.46.

Two hundred and forty-two births were registered, 116 being males, and 126 females; in 1899 the number of births was 234. Of the total deaths (139), 26 were of children under 1 year, and 51 of persons 65 years and upwards. Zymotic diseases caused 7 deaths; Respiratory diseases 13; Phthisis 9 (an increase of 3); Heart disease, 22; and accidents, 4. The deaths from Zymotic diseases, may be classified as follows:—Measles, 3; Scarlet fever, 2; Enteric or Typhoid fever, 1; and Diarrhoea, 1. Ninety-eight cases of infectious disease were notified; as follows:—Diphtheria, 2; Erysipelas, 17; Scarlet fever, 75; and Enteric or Typhoid fever, 4; these cases were notified from the following sub-districts:—Haltwhistle, 41; Henshaw, 19; Featherstone, 9; Blenkinsopp, 7; Hartleyburn, 6; Melkridge, 5; Thirlwall, 5; Coanwood, 5; and Lambley, 1.

Most of the cases of Scarlet fever occurred in the Haltwhistle and Henshaw sub-districts, the disease being present more or less throughout the whole year. The Henshaw schools were closed for a fortnight, from November 26th to December 10th.

Measles was very prevalent throughout the district, necessitating the closing of the Haltwhistle, and Henshaw Schools.

Improvements. During the year, 21 new buildings have been erected, many of which were artisans dwellings; over 350 nuisances have been rectified; the new drainage scheme for the west end of Haltwhistle has been completed, and that for Gilsland, together with the new water supply for this place, were under consideration.

Requirements. An Isolation Hospital and steam disinfector. The carrying out of the sewerage and water schemes for Gilsland. Ashpits and privies should be emptied more frequently, and at regular intervals. The report of the Medical Officer of Health should be printed and circulated.

* 15.68 if 4 deaths by accidents and 2 suicides are deducted.

HEXHAM.

Medical Officer of Health, R. BOUSTEAD, L.R.C.P., L.R.C.S., D.P.H., L.M.

Area, 200,977 acres; Estimated population, 28,855; Birth rate, 25.50; Death rate, *15.45; Zymotic death rate, 0.86; Infant mortality rate (per 1,000 births), 161.68; Phthisis death rate, 1.31; Death rate from Respiratory Diseases, 1.83.

All the above rates have decreased, (with the exception of the Infant Mortality rate, which has increased by 11.48), as follows:—Birth rate, 0.24; Death rate, 1.34; Zymotic death rate, 0.60; Phthisis death rate, 0.22; and Respiratory death rate, 0.46.

Of the total deaths (446), 119 were of children under 1 year, and 131 were of persons 65 years and upwards. Heart disease caused 48 deaths, Phthisis 38 (a decrease of 6), Respiratory diseases 53, and Zymotic diseases 25. One hundred and fifty-eight cases of infectious disease were notified, as follows:—Diphtheria 11; Membranous Croup 1; Erysipelas 25; Scarlet fever 111; Enteric fever 3; Continued fever 5; and Puerperal fever 2. The diseases were notified from the following sub-districts:—Allendale 15; Bywell 95; Chollerton 41; and Hexham 7.

Scarlet fever was very prevalent (111 cases), in the following sub-districts:—Bywell 62, Allendale 13, Chollerton 35, and Hexham 1. The Newbrough Schools, Butt Bank, and the Ninebanks Schools were closed for a short period, in order to prevent the farther spread of the disease. The number of cases of Diphtheria (11), shows a decrease of 40 over last year's return; the cases occurred in the following sub-districts:—Bywell 8; Allendale 1; Chollerton 1; and Hexham 1.

Only 3 cases of Enteric fever were notified, from the following sub-districts:—Allendale 1; Bywell 1; and Hexham 1.

Improvements. Over 30 new dwellings have been erected. Plans for an Isolation Hospital have been prepared, and laid before the Local Government Board, but difficulties as to site and construction prevent the work being proceeded with. The septic tanks at Halfway House are now in operation. Fresh water supplies have been provided at Stagshaw North Cottage, Low House Farm, and at the Kennels. A great number of nuisances have been abated, these include, faulty drains, dampness, depositing refuse on public roads, and many other, both sanitary and structural defects. Part of the main sewers at Allendale, Newton, and Prudhoe have been extended.

Requirements. Artisans dwellings are urgently needed, especially in the East of the district, where the demand is far in excess of the supply. An Isolation Hospital, and steam disinfectors are required. The water schemes at Minsteracres, and Haydon Bridge, should be carried out without further delay.

* 14.93 if 14 deaths from accidents and 1 suicide are deducted.

MORPETH.

Medical Officer of Health, W. CLARKSON, L.R.C.P., L.F.P.S.

Area, 74,652 acres; Estimated population, 17,260; Birth rate, 24.50; Death rate, *12.16; Zymotic death rate, 0.98; Infant mortality rate (per 1,000 births), 130.02; Phthisis death rate, 1.15; Death rate from Respiratory diseases, 1.56.

Of the above rates the Birth, General Death, and Respiratory death rates have all decreased, by 3.44, 0.36, and 0.20 respectively. The Zymotic and Phthisis death rates have increased, the former by 0.10, and the latter by 0.51; the Infant Mortality rate shows the substantial decrease of 23.66 per 1,000 births. Of the total deaths (210), 55 were of children under 1 year, and 50 of persons 65 years and upwards. Zymotic diseases caused 17 deaths (Enteric fever 1, and Diarrhoea 16). Phthisis caused 20

deaths; Respiratory diseases, 27; Heart diseases, 23; and accidents, 10. Forty-five cases of infectious disease were notified, (38 from the Colliery, and 7 from the agricultural locality), as follows:—Diphtheria 1; Membranous Croup 1; Erysipelas 2; Scarlet fever 26; Enteric fever 13; and Puerperal fever 2.

The Medical Officer of Health sub-divides his district into two localities, as follows:—

Localities.	Population.	Number of Deaths.	Death rate.	Zymotic Death rate.	Respiratory Death rate.	Phthisis Death rate.	Infants Mortality rate per 1,000 births.
Colliery	13,310	162	11·81	1·02	1·45	1·24	137·36
Agricultural	3,550	48	13·52	0·84	1·97	0·84	74·84

Of the total births (423), 364 were registered in the Colliery, and 59 in the agricultural district. Of the total deaths (210), 162 occurred in the former, and 48 in the latter.

Cases of Scarlet fever occurred at various places, but chiefly at Swarland Terrace, Broomhill. The Medical Officer of Health points out that this Terrace is not long without fever of some kind breaking out, owing to the privy middens being built in confined places, and too near the dwelling houses.

Measles was epidemic during the latter part of the year, necessitating the closure of the Hartburn School.

The Medical Officer lays stress upon the evils arising from the neglect of the district council to frame bye-laws; not only can houses be built on any kind of land, without preparation, or special precautions, should such be necessary, but the areas of yards, and the width of streets, may be curtailed to a dangerous extent, and many instances are forthcoming of houses having been occupied, before any provision had been made for either water supply, or drainage.

Improvements. Widdrington Colliery, and adjacent places, have wonderfully improved since the locality was formed into a special scavenging area. Several privies have been abolished, and earth closets substituted. Drainage has been improved, and better sinks provided. New houses have been built, and many houses spouted.

Requirements. The condition of Swarland Terrace, Broomhill, urgently requires attention; the privy middens are too near the houses and should be abolished. A satisfactory water supply is much needed for Widdrington. Proper bye-laws should be framed and enforced. An isolation hospital and disinfectant.

* 11·58 if 10 deaths from accidental causes are deducted.

NORHAM AND ISLANDSHIRE.

Medical Officer of Health, J. PAXTON, Junr., L.R.C.P., L.R.C.S.

Area, 46,067 acres; Estimated population, 6,366; Birth rate, 23·09; Death rate, *13·19; Zymotic death rate, 0·62; Infant mortality rate (per 1,000 births), 115·63; Phthisis death rate, 1·09; Death rate from Respiratory Diseases, 1·41.

The Birth rate has increased by 0·63, and the General death rate by 1·10; the Phthisis and Respiratory death rates have both decreased, the former by 0·16, and the latter by 0·47; the Infant Mortality rate shows the large increase of 45·70, and the zymotic death rate an increase of 0·15.

Of the total deaths (84), 17 were of children under 1 year, and 31 of persons 65 years and upwards; Zymotic diseases caused 4 deaths (whooping cough 3, and enteric fever 1); Phthisis, 7 (a decrease of 1); Respiratory diseases, 9; Heart disease, 11; and accidents 6. Eighteen cases of infectious disease were notified, as follows:—Diphtheria 3, Erysipelas 3, Scarlet fever 7, and Enteric fever 5.

The Medical Officer of Health sub-divides his district into two localities as follows:—

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1,000 births.
Norham & Islandshire	5814	77	13.24	...	...	...	108.69
Ord	552	7	12.68	...	...	...	111.11

In consequence of representations made to the Council, an enquiry has been held into the existing conditions of the public water supply at Norham, with the result that it was considered satisfactory. The Medical Officer points out the impossibility of a patient suffering from infectious disease, being either isolated, or properly nursed, in an already overcrowded house, and urges upon the sanitary authority the necessity which exists for an isolation hospital.

Improvements. The temporary defects in the new water supply at South Berrington have been rectified. At Prior House, a new dairy has been provided, and the drainage system remodelled. The insanitary conditions at Fenham Hill, and Shoreswood, have been the subject of proceedings before the Justices, and orders obtained for their abatement. Improvements have been carried out at Butlery Hill, Cornhill, East Kyloe, Norham, and West Ord. A dwelling house at Norham, reported as unfit for human habitation, has been closed. The condition of the dairies in the district has greatly improved, since the new regulations came into force in 1899.

Requirements. The Bucton Water Supply was found unsatisfactory, and requires immediate attention. The old wells at South Berrington (condemned some years ago), were again used, and should be finally closed. Insanitary conditions were found at Fenham Hill, Shoreswood, and Shell-acres. An Isolation Hospital, and steam disinfectors, should be provided.

* 12.25 after deducting 6 deaths from accidents.

ROTHBURY.

Medical Officer of Health, F. BARROW, M.R.C.S., L.S.A.

Area, 166,959 acres; Estimated population, 4,800; Birth rate, 23.95; Death rate, *19.79; Zymotic death rate, 2.29; Infant mortality rate (per 1,000 births), 139.13; Phthisis death rate, 2.08; Death rate from Respiratory diseases, 1.25.

All the above rates, with the exception of the Zymotic death rate, which remains the same, show an increase over those for the previous year; the increase in each case is as follows:—Birth rate, 0.20; General death rate, 7.29; Phthisis, 1.67; Respiratory death rate, 0.21; the Infant mortality rate shows the large increase of 51.42 per 1,000 births.

Of the total deaths (95), 16 were of children under 1 year, and 36 of persons 65 years and upwards. Zymotic diseases caused 11 deaths (measles 2, scarlet fever 3, whooping cough 3, diphtheria and membranous croup 2, and enteric fever 1), Phthisis 10, Respiratory diseases 6, Heart diseases 14, and Apoplexy, deaths. The cases of infectious disease notified numbered 63, classified as follows:—Diphtheria 8; Erysipelas 6; scarlet fever 46; and Enteric fever 3.

The Medical Officer of Health divides his district into seven localities as follows:—

Localities.	Population.	Number of Deaths.	Death Rate.	Zymotic Death rate.	Respiratory Death rate.	Phthisis Death rate.	Infant Mortality rate per 1,000 births.
Rothbury	1300	28	21.53	4.61	0.76	0.76	130.43
Whittingham	840	11	13.09	1.19	1.19	2.38	142.88
Longframlington	520	14	26.92	Nil	Nil	Nil	200.00
Alwinton	1000	17	17.00	1.00	2.00	4.00	137.93
Brinkburn	160	4	25.00	6.25	6.25	Nil	Nil
Cambo and Elsdon	520	9	17.30	3.84	1.92	1.92	227.27
Alnham, Longhorsley and Netherwitton...	500	9	18.00	Nil	Nil	4.00	83.33

Measles was prevalent, causing the closure of Todley Moor, Lee, and Framlington Schools. The Elsdon schools were closed in April, owing to an outbreak of whooping cough. Scarlatina cases occurred in the Rothbury, Whittingham, Alwinton, Cambo, Elsdon, Longframlington, Long Horsley, and Netherwitton divisions, necessitating the closure of Hepple schools.

Improvements. Drainage has been improved at the Tower, and schools, and other houses and premises at Whittingham, and Whittingham Lane; also at Longframlington, Hepple, Warton, Trewitt Steads, Coatwalls, Netherton Mill, Serenwood, East Raw, Rothley East Shield, Snitter, High Trewitt, Harbottle, and Great Ryle. The Glanton sewage is now treated in a septic tank, and no longer causes a nuisance on the Whittingham road. Miller's house, Whittingham, which had been closed by the Board's order, has been rebuilt, and sanitary requirements provided. Bye-laws have been framed and forwarded to the Local Government Board for approval.

Requirements. A better water supply at Butterknowes, Netherton Buildings, Great Ryle, Harwood, Snitter, and Windyside. At Thropton a depot for ashes and refuse, which are still deposited on the banks of the Wreigh. Attention to ashpits in several places, where they are uncovered, and receive all the rain-water from adjoining roofs or spouts. Drainage for Castron house, cottages, and school, the two last-named also needing outbuildings. The isolation hospital requires several alterations and additions; a disinfectant and an ambulance should be provided.

* The general death rate is reduced to 17.91 if the deaths of 6 non-residents, also 2 from accidents, and 1 suicide are deducted.

TYNEMOUTH No. 1.

Medical Officer of Health, A. S. TAYLOR, L.R.C.P., L.R.C.S., L.M.,
L.F.P.S.

Area, 7,929 acres; Estimated population, 9,656; Birth rate, 31.58; Death rate, *15.01; Zymotic death rate, 1.44; Infant mortality rate (per 1,000 births), 104.91; Phthisis death rate, 1.86; Death rate from Respiratory diseases, 2.17.

The Birth rate, and Phthisis death rate, have increased, the former by 4.17, and the latter by 0.28; the General death rate, the Zymotic, Respiratory, and Infant mortality rates, have all decreased, by 4.97, 0.46, 1.10, and 130.61 respectively. Of the total deaths (145), 32 were of children under one year, and 28 of persons 65 years and upwards. Zymotic diseases caused 14 deaths; Respiratory diseases 21; Phthisis 18; and Heart

diseases 13. One hundred and thirty-four cases of infectious disease were notified, classified as follows:—Diphtheria 2; Erysipelas 37; Scarlet fever 59; Enteric fever 35; and Puerperal fever 1. The 14 deaths from the seven principal Zymotic diseases were:—Whooping cough 3; Diphtheria and Membranous Croup 2; Enteric fever 7; and Diarrhoea 2.

The district is as usual sub-divided into six localities as follows:—

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1,000 births.
Seaton Delaval ...	5,147	83	16.12	1.16	1.55	2.33	109.75
Hartley ...	1,566	17	10.85	1.27	1.27	0.63	71.42
Horton ...	2,424	33	13.61	1.23	3.71	1.65	150.94
Hartford West ...	89	0	Nil	Nil	Nil	Nil	Nil
Hartford East ...	339	12	35.39	8.84	5.89	2.94	68.96
Bebside ...	91	0	Nil	Nil	Nil	Nil	Nil

Of the 59 cases of Scarlet fever notified, 56 occurred in the Seaton Delaval locality, 2 in Hartley, and 1 in Horton; the cases were more or less scattered, and did not assume the proportions of an epidemic. Measles was throughout the whole district more or less prevalent, though the disease was of a milder type than formerly; at Seaton Sluice and Old Hartley it became epidemic, causing the schools at the former place to be closed.

Improvements. The practice of bringing truck loads of manure to the depot at the north of the pit at Seaton Delaval, was discontinued during the hot weather. The hinds cottage at Gloucester Lodge farm (where Enteric fever occurred), was found to be in an insanitary condition, and has been condemned as unfit for human habitation. Scavenging was carried out better than in former years in most of the district.

Requirements. A water supply, not liable to be cut off without notice. An isolation hospital, and steam disinfectory; abolition of privy ashpits as at present constructed; more houses for the weekly wage class, especially at Seaton Sluice and Seaton Delaval.

* 14.80 if 1 death from accident and 1 from suicide are deducted.

TYNEMOUTH No. 2.

Medical Officer of Health, The Late P. ALEXANDER, L.R.C.P., L.R.C.S., L.M.

Area, 7,240 acres; Estimated population, 10,362; Birth rate, 33.87; Death rate, *18.33; Zymotic death rate, 2.12; Infant mortality rate (per 1,000 births), 188.03; Phthisis death rate, 1.44; Death rate from Respiratory diseases, 1.64.

The death of the late medical officer of health (Dr. Alexander) took place early in the year, and a protracted but fruitless search was made for any papers, containing information, statistical or otherwise, which would make it possible to calculate the different mortality rates, &c., &c., for this sanitary district.

The county medical officer of health considered it advisable to obtain what particulars he could, relating to births, deaths, cases of infectious diseases notified, death rates from different causes, age periods at which such deaths occurred, the localities from which such cases of infectious diseases were notified, and in which the deaths took place, as without this information, no annual report whatever could be issued for this

sanitary district, and consequently no county rates could be calculated. In making this search, which necessarily occupied a considerable time, the county medical officer was very materially assisted by Mr. Whitehorn (Clerk), Mr. Dinning (Engineer), Mr. Wood (Registrar), and by the Sanitary Inspector (Mr. Waters), to all of whom he tenders his hearty thanks for their help.

Of the above rates, the Birth, General death, and Phthisis death rates, have all increased, by 3.53, 3.84, and 0.64 respectively; while the Zymotic and Respiratory death rates have decreased, the former by 1.24, and the latter by 1.08. The Infant Mortality rate shows the substantial decrease of 23.05 per 1,000 births. Of the total deaths (190), 66 were of children under 1 year, and 29 of persons 65 years and upwards. Zymotic diseases caused 22 deaths (measles 7, scarlet fever 6, whooping cough 4, and diarrhoea 5); Phthisis caused 15, and Respiratory diseases 17 deaths. One hundred and nine cases of infectious disease were notified, viz:—Scarlatina 87; Erysipelas 16; Diphtheria 1; Membranous Croup 1; Puerperal fever 1; Continued fever 1; Enteric fever 2.

It having been found possible to ascertain the populations of subdivisions of this district, and the deaths from different causes occurring in each sub-division, the following table has been prepared:—

Localities.	Population.	Number of deaths.	Death rate.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Infant mortality rate per 1000 births.
Longbenton (northern portion) ...	7148	141	19.72	2.37	1.81	1.53	184.42
Burradon (township)...	1215	18	14.81	1.64	Nil	0.82	214.28
Wallsend (Willington, Rosehill) ...	1999	31	15.50	1.50	2.00	1.50	184.61

Improvements. Nearly one hundred houses have been built, in the Long Benton, Willington, Hartley, Seaton Delaval, and Hartford districts, besides numerous alterations and additions to existing property. About a quarter of a mile of new streets have been constructed, by owners of property in the Benton district, and about half that length in the Willington district. The scavenging of Long Benton parish—Burradon and Camperdown parishes—was on several occasions considered by the District Council, but during the year under consideration no definite conclusions were arrived at. Much needed improvements in the houses at West Moor were commenced. A resolution was passed, to improve the sewerage system at Biggs' Main. The Newcastle and Gateshead Water Company laid about fifteen hundred yards of twelve-inch water main in the Long Benton district, and about four hundred yards of three-inch water main in Willington. More than two thousand yards of sewers were laid in the Long Benton district; over three hundred yards in Willington; nearly 200 yards in Hartley; and one hundred and fifty yards in Bebside.

Requirements. A water supply for the whole district, not liable to be cut off without notice. An isolation hospital, and disinfecter. Improvement in the dwelling houses, and general sanitary condition of West Moor in particular. Improved scavenging, especially at the place just mentioned. Abatement of the nuisance caused by the pollution of Willington Gut, by sewage from the Tynemouth rural district.

* 17.66 if 5 deaths from accidents, and 2 suicides are deducted.

TABLE OF VITAL STATISTICS, &c., 1900.

