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STAFFORDSHIRE COUNTY COUNCIL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

GEORGE REID, M.D., D.P.H.,

FOR THE YEAR 1896.

STAFFORD:
PRINTED BY J. & C. MORT, 39, GREENGATE STREET.
1897.

This Correction has been made

STAFFORDSHIRE COUNTY COUNCIL. Lib.

Annual Report of County Medical Officer, 1896.

Owing to an unfortunate oversight in proof correcting, the figures showing the number of infected houses in the Leek Urban District, which appear on page 112 of my Report for 1896, have been introduced one vertical column too near to the left of the table.

The figures as they should have appeared are printed on the accompanying gummed slip, which you will greatly oblige by pasting over the Leek section of the table in question in your copy of the Report, as it is important to avoid the possible risk of future erroneous conclusions being drawn from the health statistical returns of the Administrative County.

GEO. REID,

County Medical Officer.

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STAFFORDSHIRE COUNTY COUNCIL.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH,

Presented to the Council at the Quarterly Meeting,

November 2nd, 1897.

IN this, my eighth Annual Report, I propose to adhere, so far as collating the reports of District Medical Officers of Health is concerned, to the general plan adopted originally, and deal with the various reports under subject headings, in place of devoting a special summary to each, as is done in some county reports.

Were it not for the fact that the Administrative County contains so many sanitary districts, the latter plan would possibly be the better, but to adopt it, under the circumstances, and, at the same time, give sufficient prominence to the more important features of each report under review, would necessitate needless repetition, many remarks being equally applicable to several districts.

While this is so, I feel it is desirable that members of the Council who may wish to see at a glance the leading features of certain districts, ought to have the means of doing so, and, in order to admit of this, I have again introduced a summary, in tabular form, and in alphabetical order, of the vital statistics and prominent characteristics of each report. These tables, one for urban and the other for rural districts, will be found at the end.

In addition to this, I have indexed the Report, so that each question dealt with, whether of general or special significance, may at once be referred to.

The other general tables correspond exactly with those of last year's Report.

I take this opportunity of thanking the Medical Officers of Health, who, almost without exception, have fallen in with my suggestions as to the introduction into their reports of certain details which, from the point of view of the County Council, are of great value. There is still room, however, in some of the reports, for greater detail in the accounts given of the various outbreaks of infectious disease. It is also desirable that corrections should in all cases be made in the statistics of those districts where large public institutions, such as General Hospitals and Union Workhouses, affect the returns to an extent which materially interferes with accurate deductions being drawn from the figures of the districts which contribute to the institutions in question; in many cases these corrections are made, but in a few they are not.

It is satisfactory to be able to record that, in response to the appeals of the County Council, nearly all the annual reports of District Medical Officers of Health are now printed.

In the "Summary of the Year's Work of the Sanitary Committee of the County Council," I have endeavoured to convey some idea of what has been done in public health work, more with the view of indicating the lines on which the Committee are proceeding than with the hope that such a condensed account can convey an adequate idea either of the work itself or the good which has attended it.

Summary of the Year's Work of the Sanitary Committee of the County Council, with General Comments on Public Health Administration.

As regards the summary of the work of the Sanitary Committee, I may point out that it embraces a period of twelve months, ending July, 1897, as the last summary covered the ground up to the end of July of the previous year. So far as that portion of the report which deals with the reports of District Medical Officers of Health is concerned, the period covered embraces 1896 only.

The routine work under the Rivers Pollution Prevention Act has proceeded on former lines. The systematic work of inspecting existing sewage disposal works, and the collection of samples of sewage effluents and river water at fixed points on streams, has been conducted almost uninterruptedly during the year. In all, 250 analyses have been made, of which 140 were sewage effluents, and the remainder, samples of river water. It has been the custom to call the Committee's attention, at the time, to any irregularities which were noted in the management of sewage works, and the responsible Authorities in such cases were invariably communicated with.

To comment at all fully on the action which has been taken during the year in the matter of rivers pollution would require more space than can well be devoted to one subject in a report of this description. Still, it may be useful to refer, shortly, to the more important questions in this department of the Committee's work which have received attention.

In my last Annual Report I referred to a detailed inspection which had been made in North Staffordshire for the purpose of reviewing the work of the Sanitary Committee as regards rivers pollution. This inspection has led to very satisfactory results, as most of the Authorities, in consequence of the pressure which was thus brought to bear upon them, are now making serious efforts either to provide efficient sewage disposal works, or to improve those that now exist.

I may state that a similar enquiry is now being conducted in the south of the County.

Another matter of supreme importance, which has been handed on from last year, is the investigation into the pollution of the Tame, an enquiry which deals with the circumstances of sewage disposal of a population approaching 1,400,000.

The Birmingham Officials have worked with me in the enquiry, which has involved even more labour than was anticipated in the first instance. I hope in the course of a month or two that the work of this enquiry will be detailed in the form of a report, which will assist the Authorities in the watershed in question in arriving at the facts of the case, and in coming to some understanding as to the remedies which may most advantageously be adopted.

Meanwhile Birmingham, the paramount Authority in the watershed, has not been standing still, but has obtained enabling powers by Act of Parliament to more than double the irrigation area at present available.

As regards other work under this heading, besides numerous communications with Authorities, and consultations with their officers, thirty-seven special reports have been presented to the Sanitary Committee during the year dealing with questions relating to rivers pollution ; space, however, will not allow of more than an enumeration of the districts to which the reports in question had reference, as follows:—Audley, Burslem, Coseley, Darlaston, Handsworth, Hanley (C.B.), Leek, Lichfield, Longton, Smallthorne, Smethwick, Stafford, Stoke, Stone, Tipton, Tunstall, Uttoxeter, West Bromwich (C.B.), and Willenhall Urban Districts, and Blore Heath, Lichfield, Tutbury, Walsall, and Wolstanton Rural Districts.

Local Government Board Inquiries with reference to sewage disposal, at which I was present, were held in the following districts during the year, namely :—Brownhills Urban District, Wolverhampton (C.B.), and Lichfield, Stoke-on-Trent, and Walsall Rural Districts.

The Council will remember that in former Reports I called attention to the fact that the Local Government Board had repeatedly declined to give notice of its Inquiries to County

Councils. Now, however, the Board has consented to give formal notice in every case.

As regards the general work of the Sanitary Committee, much has been done during the year. Special reports have been presented dealing with important matters affecting Brierley Hill, Cannock, Darlaston, Longton, Quarry Bank, Sedgley, Smethwick, and Tunstall Urban Districts, and Cheadle Rural District.

The Sanitary Committee have not lost sight of the Isolation Hospital question, and although I cannot yet report that any hospital area has been formed, negociations are in progress with this object in the case of several districts both in the north and south of the County. The Committee have taken a wise step in obtaining model plans of such hospitals, and these, no doubt, will prove of service when isolation hospital districts come to be formed.

It is satisfactory to be able to record that the Uttoxeter Urban and Rural Districts have adopted the Compulsory Notification of Infectious Diseases Act, thus reducing the number of districts in the County where the Act is not in force to five, as shown later on in this Report.

In addititon to the work shortly detailed above, I have been called in or consulted by Medical Officers of Health and other officers of Local Authorities on 62 occasions.

Again, my duties have not been confined to work over which the Sanitary Committee have control. I have been consulted on several occasions by the Boundaries Committee, the Standing Joint Committee, the County Lunacy Committee, and the Technical Instruction Committee, and have attended several of their meetings, at which my reports on matters under their charge were considered.

I may mention that the details of drainage and general sanitary work at Cheddleton Asylum have occupied a good portion of my time, as has the question of the design of the isolation hospital for that Asylum which is still under consideration.

I regret that the Council have had to hand over to the Technical Instruction Committee the building which was originally intended for a sanitary museum. This step became necessary owing to the fact that more accommodation was required for technical instruction purposes in the building of which the proposed museum formed part, but it is understood that as soon as circumstances permit some other provision will be made which will allow of a museum being provided.

It is satisfactory to be able to record that a series of lectures on infant feeding have been given in various districts throughout the County under the auspices of the Technical Instruction Committee as the outcome of a suggestion contained in my last Annual Report. I have made enquiry from various sources as to how the lectures have been received, and, judging from the very fair attendance at the lectures, one is justified in concluding that good will result from them.

In this section of my Report it will be convenient to refer to certain matters of general policy arising either out of the reports of the various District Medical Officers of Health, or recent work of Government departments. One of the most satisfactory features of this year's district reports is the continued advance which is taking place in the department of excrement and refuse disposal. In most of the districts throughout the Administrative County efforts are being made —in some cases on a fairly large scale—to abolish the old privy system in favour of water-carriage. It is to be hoped that the account of this movement which is recorded in this Report will stimulate those Authorities, of urban districts more especially, who are not displaying so much energy in this direction, to adopt this excellent policy.

Another satisfactory feature of the reports under review is the evidence they contain of considerable activity in the abolition of private well-water supplies in districts where public supplies are available. The dangerous character of local supplies is amply evidenced by the fact that so large a percentage of well waters which were analysed in the various

districts in the Administrative County during the year were condemned.

In my last Report I referred to the Report of the Royal Commission on Vaccination which had recently been presented, and predicted that new legislation would probably follow upon it. So far, nothing has been done in this direction, but the matter is at present receiving the attention of the Local Government Board.

Area and Population.

As regards the area of the County, I have no alteration to record this year, but several district boundaries have been re-arranged as follows:—

1. In the Brownhills Urban District the Parish of Hammerwich, and part of the Parish of Ogley Hay, previously in the Urban District, have been transferred to the Lichfield Rural District.

2. A small part of the Wednesfield Urban District has been transferred to the Short Heath Urban District.

3. In the Cannock Rural District, the Parish of Church Eaton has been united with the Parish of Gnosall, and now forms the Gnosall Rural District.

4. In the Cheadle Rural District, part of the Parish of Denstone-in-Alton has been transferred to the Uttoxeter Rural District, and, together with the Parish of Rocester, now constitutes the Parish of Denstone in the Uttoxeter Rural District. Also, in the Cheadle Rural District another part of the Parish of Denstone-in-Alton has been transferred to the Uttoxeter Rural District and united to the remaining portion of the Parish of Rocester.

5. In the Leek Rural District, part of the Parish of Norton-in-the-Moors has been transferred to the Parish of Milton, within the Wolstanton Rural District.

6. In the Stoke Rural District, the Townships of Clayton and Seabridge have been constituted the Parish of Clayton and transferred to the Newcastle Rural District.

7. In the Stone Rural District, a portion of the Parish of Trentham has been added to the new Parish of Clayton within the Newcastle Rural District.

8. In the Uttoxeter Rural District, the populous part of the Parish of Uttoxeter has been constituted an Urban District.

The estimated aggregate population is shown in the following table, which also distinguishes the urban from the rural populations, and gives the comparative figures according to the 1891 Census:—

	Census, 1891.	Estimated to middle of 1896.	Increase.	Decrease.
Urban.....	551,500	590,441	38,941	...
Rural.....	217,349	225,095	7,746	...
Total.....	768,849	815,536	46,687	...

Births.

The mean birth-rate of the whole Administrative County, and of the urban and rural districts respectively, for the eight years 1889-96, is shown in the following table, in which corresponding rates for England and Wales, and for the large towns in England, taken from the Registrar-General's Returns, are included :—

DISTRICTS.		BIRTH-RATE PER 1000 OF POPULATION.							
		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Staffordshire	Combined Urban & Rural	33·5	32·7	35·7	35·1	35·7	34·3	35·1	34·2
	Urban.....	35·2	34·5	37·3	36·3	36·6	35·4	36·2	35·4
	Rural.....	29·5	28·6	31·6	32·2	33·3	31·6	32·0	31·2
England and Wales.....		31·1	30·2	31·4	30·5	30·8	29·6	30·3	29·7
Large Towns in England		30·9	30·4	32·5	31·8	31·8	30·6	31·2	31·2

The relatively high birth-rate of Staffordshire, as compared with the rest of England, is undoubtedly to be accounted for, as I have explained in former Reports, by the large artisan population of the County, and the consequent predominance of young adults.

The Urban Birth-rates are shown in the statistical tables at the end of this Report, and little need be said about them here, beyond pointing out that in six instances—viz., Brownhills, Darlaston, Fenton, Heath Town, Short Heath, and Tunstall—the rates exceed 40 per 1,000 of the population. It will be noticed that in all these cases the populations are made up of artisans.

The Medical Officer of Health of Stafford points out that in previous reports he has drawn attention to the progressive decrease in the birth returns, and calls attention to the fact that this year's rate (29·6) is the lowest recorded in any year, except 1890, and is upwards of two per 1,000 below the mean rate of the preceeding ten years.

In Tipton, this year's birth-rate of 39·3 is said to be the highest during the past ten years, with one exception, namely, that of 1890.

In Tunstall, where the very high rate of 44·3 is recorded, the Medical Officer of Health points out that it has never reached that figure in the history of the town.

Deaths.

The number of deaths registered in the Administrative County in 1896 amounted to 14,091, as compared with 14,856 in 1895, 12,948 in 1894, 14,728 in 1893, 14,746 in 1892, and 15,614 in 1891.

In the following table comparative figures for the past eight years are given, together with corresponding figures for the country as a whole, and for town and country districts throughout England.

DEATH-RATE PER 1000 OF POPULATION.

	Staffordshire.			England.		
	General.	Urban.	Rural.	General.	Large Towns.	Country Districts.*
1889 ...	18·0	18·9	15·4	17·9	19·2	16·5
1890 ...	19·8	20·0	16·3	19·5	21·6	17·5
1891 ...	19·9	20·7	18·1	20·2	22·4	18·5
1892 ...	18·8	19·2	17·9	19·0	20·6	18·1
1893 ...	18·6	19·5	16·3	19·2	21·5	17·4
1894 ...	16·2	16·5	15·4	16·6	18·0	15·6
1895 ...	18·5	19·1	16·9	18·7	20·5	17·0
1896 ...	17·2	18·0	15·2	17·1	19·2	15·3

* Certain proportion of Urban residents included.

It will be noticed that, with one exception, namely, 1894, the mean Urban death-rate of the County is the lowest recorded since the institution of the Council. I pointed out in my Report for 1894 that the exceedingly low rate that year was to be attributed chiefly to two causes, first, to the prevalence of influenza during the previous years, which had the effect of not only raising the standard of comparison but also of greatly reducing the number of the aged and feeble, whose lives might otherwise have been prolonged to swell the death returns of the year in question; and, secondly, to the remarkable absence of summer diarrhœa, which is usually so fatal among infants.

As regards the rural districts of the County, it will be noticed that the death-rate is the lowest recorded in the history of the Council.

Death-rates in Urban Districts.—These, together with the figures upon which they are based, are shown in the tables at the end of the report. In the following table the figures are given for those districts in which the rates may be said to be very high, together with figures and remarks bearing on the influences that causes, preventable, and more or less non-preventable, have had on the results. The districts are placed in order, in accordance with the death-rates, the highest being placed first.

DISTRICT.	Death-rate per 1000 of Population.	Population estimated to middle of 1896.	Number of persons to the Acre.	Zymotic death-rate per 1000 of population.	Occupation, &c.	Increase over average of entire districts from the undermentioned diseases, affecting appreciably the general rate.				Position as regards mean death-rate of former years.
						Measles.	Whooping Cough.	Diarrhœa.	Diseases of Respiratory Organs.	
Longton ..	22·5	36,240	18·1	4·58	Working class.	Considerable.	..	Slight.	Slight.	Mean for 7 years, 23·9.
Tipton	21·3	29,816	11·0	2·75	,,	..	Slight.	..	Slight.	Mean for 7 years, 19·4.
Darlaston ..	21·2	15,141	18·9	2·77	,,	..	Slight.	Slight.	Very considerble	Mean for 10 years, 22·7.
Fenton	21·2	20,500	12·8	3·75	,,	Slight.	..	..	..	Mean for 7 years, 21·0.
Tunstall ..	21·0	16,510	19·8	1·99	,,	..	Slight,	..	..	Mean for 7 years, 23·2.
Wednesbury	20·8	25,300	11·8	3·24	,,	Considerable.	..	..	..	Mean for 9 years, 18·2.
Burslem ..	20·5	34,232	13·2	4·35	,,	..	..	Considerable.	..	Mean for 21 years, 22·3.
Sedgley	20·0	15,000	3·9	5·73	,,	..	..	Slight.	..	Mean for 9 years, 19·9.

It will be noticed from the last column that all these districts, with the exception, possibly, of Wednesbury, must be looked upon as high death-rate districts.

In Bilston Urban District, the death-rate this year is 19·5, compared with 26·9 in 1895. The high death-rate of 1895 was explained at considerable length by the Medical Officer of Health in his report for that year, and was attributed chiefly, first, to the fact that a high rate is to be expected in that district because of its purely artisan population, and the absence of surburban resident element, and secondly, because of a very fatal epidemic of measles, and the prevalence of summer diarrhœa.

In Brownhills Urban District, where the rate was slightly increased, the Medical Officer of Health suggests as a reason the fact that the rural portion of the old district, where the rate would not be expected to be so high, has now been transferred to the Lichfield Rural District.

In Sedgley, where the death-rate amounted to 20·0, the Medical Officer of Health explains that this is to be attributed to increased deaths from pulmonary diseases at the beginning and end of the year, and to an epidemic of measles. I would point out, however, that the mean rate for the past nine years in this district amounts to 19·9.

In Smethwick, where this year's rate was 16·8, compared with 14·4 the previous year, the increase is explained by an epidemic of measles and increased fatality in lung affections.

In most of the other districts attention is directed to the exceedingly low death-rate for the year; for example—

The Medical Officer of Health of Brierley Hill, where the rate amounted to 14·8, calls attention to the fact that it is the lowest which has been recorded in the district for twenty years, and attributes this chiefly to a diminished mortality among infants and old people.

In Coseley, where the rate this year amounted to 17·9, compared with 19·2, the mean rate for the past ten years, fewer infant deaths is said to be the cause of the decline.

In Darlaston, notwithstanding the fact that the death-rate amounts to 21·2, the Medical Officer of Health points out that it is the lowest which has been recorded during the past seven years. It will be seen from the above table that the mean rate for this district for the past ten years amounts to 22·7.

In Leek, where this year's rate amounted to 16·6, with one exception, namely in 1874, it is said to be the lowest rate which has been recorded for forty-six years.

The Medical Officer of Health of Lichfield calls attention, with satisfaction, to a rate of 14·1, which he explains by diminished deaths among old persons.

The Medical Officer of Health of Stafford, where the corrected rate amounted to 14·1, refers to it as one of the lowest on record, and no less than two per 1000 below the mean rate for the previous ten years.

Death-rates in Rural Districts.—In most of the rural districts, as in the urban, the rates are favourably commented upon. Among those districts where the comparative figures are most satisfactory may be mentioned Mayfield, Seisdon, Walsall, and Wolstanton.

Uncertified Deaths.

In most of the reports figures are given showing the number of uncertified deaths.

In Bilston, the Medical Officer of Health calls attention to a continued improvement in recent years in this respect. In this district only four uncertified deaths occurred, whereas, in 1889, the number amounted to 30, and in 1890 to 26.

The Medical Officer of Health of Sedgley writes:—"There have been 10 deaths uncertified by any qualified medical practitioner, as compared with 8, 6, 6, and 14 in the four previous years. Four of these were infants aged 5 minutes, 8 hours, 14 hours, and 14 hours, and the cause of death given in each of these cases was prematurity of birth. Four were old people aged 55, 76, 78, and 78, all said to have died from heart disease. One child, aged 3 years, is said to have died of measles, and another child, aged 8 months, of convulsions. No inquest was held in any of these 10 cases."

One can hardly allow the last sentence to pass without comment. No doubt there are many similar examples throughout England which point to the necessity of a reform in the present registration machinery.

In the Cannock Rural District, I specially referred in my last Report to a great increase in uncertified deaths. This year the figure is a little more satisfactory, namely, 5·1 per cent of total deaths, compared with 8·6 in 1895. As the rate of uncertified deaths in this district seems high, I give the figures for the past seven years :—

Percentage of Total Deaths.

1890	...	3·9	1893	...	4·4
1891	...	3·0	1894	...	3·2
1892	...	3·9	1895	...	8·6
			1896	...	5·1

The Medical Officer of Health of the District attributes the high number of uncertified deaths to the scattered district where doctors often cannot be summoned to patients in time, and to infants dying at birth in the absence of a medical attendant.

Infant Mortality.

Although the infant mortality in the urban districts in the County is still maintained at a lamentably high figure, there is a distinct improvement this year compared with last, for, whereas in 1895 no fewer than 181 infants died among every 1000 born ; this year the figure is reduced to 171, a rate which is slightly lower than the mean for eight years, as will be seen by the following table :—

Deaths in children under one year per 1000 registered births.

	Bilston.	Brierley Hill.	Burslem.	Coseley.	Darlaston.	Fenton.	Heath Town.	Longton.	Newcastle
1889	204	152	197	187	207	162	204	216	143
1890	182	218	217	149	191	192	200	231	157
1891	210	179	171	180	235	193	252	224	188
1892	219	175	189	161	215	186	221	231	156
1893	202	167	194	177	221	193	158	225	194
1894	175	170	190	133	174	251	143	238	150
1895	224	173	182	216	221	216	222	234	165
1896	181	151	216	164	183	196	171	235	200
Mean rate.	199	173	193	171	206	198	196	229	169

	Rowley Regis.	Small-thorne.	Stoke-on-Trent.	Tipton.	Tunstall.	Wednes-bury.	Willen-hall.	Urban Districts in County.	Large Towns in England.
1889	152	171	149	180	211	194	178	168	161
1890	199	191	190	167	220	176	156	176	171
1891	144	183	160	205	232	162	179	175	167
1892	181	128	161	164	198	150	189	174	163
1893	173	216	159	183	206	173	207	179	181
1894	169	161	183	161	173	134	223	163	152
1895	194	152	179	173	288	191	186	181	182
1896	182	171	169	183	194	174	187	171	167
Mean rate.	173	171	169	177	215	169	188	173	168

In the above table those districts are included which have a mean infant mortality rate for the past eight years exceeding that figure for the thirty-three large towns in England.

It will be noticed that in only three instances has the enormous rate of 200 and upwards been reached this year, whereas, in 1895, this figure was exceeded in seven instances.

It must not be supposed, because prominence is given in the above table to these towns which have exceptionally high infant death-rates, that, therefore, other towns have favourable records; this is far from being the case, as a glance at the sixth column of the death-rate table at the end of this Report will show.

The Medical Officer of Health of Biddulph, under this heading says:—"The most pitiful part of a Medical Officer's Report is that which tells of the tremendous annual waste of infant human life, and most of it due to simple ignorance."

In Bilston, the Medical Officer of Health, in discussing the infant mortality from the point of view of child insurance, says:—"From particulars furnished to me by the Registrar, it appears that of the 250 children under five years of age who died during the year, 156 were insured. It is interesting to note that this number is almost identical with the deaths of infants under one year of age (157). What influence on the

infantile mortality this matter of Child Insurance has is very difficult to say, but it will be useful to receive and tabulate the figures for a series of years, and this I hope to do with the Registrar's kind assistance."

The Medical Officer of Health of Brierley Hill, where the mortality this year amounted to 151, refers to the fact that this is a considerable reduction upon the mean for the previous ten years, which amounts to 156.

The Medical Officer of Health of Cannock, where the rate this year amounted to 164, writes :—

"The heavy percentage of infantile mortality is explained by the following facts, viz. :—(1) 33 died from bronchitis and pneumonia, or 25·7 per cent. (2) 23 died from marasmus, or 17·9 per cent. (3) 21 died from premature birth, or 16·4 per cent. (4) 18 died from convulsions, or 14·3 per cent. Five died from measles, 6 from whooping cough, 5 from tuberculosis, 5 from atelectasis or imperfect æration of lungs, 4 from diarrhœa, 1 from scarlet fever, 1 from cirrhosis, 1 from erysipelas, 2 from natural causes, and 3 from indigestion.

"A glance at the above figures will show that despite the deaths from unavoidable causes, a good many of them would in my opinion be avoided by a systematic instruction of the mothers as to the proper feeding and clothing of infants, especially those who are artificially fed. The institution of a Women's Health Society, if we may so call it, in the district, for the purpose of diffusing instruction upon infant feeding, cleanliness, and clothing, would no doubt lessen our infantile mortality, and it is to be hoped that the course of lectures, embracing Hygiene, given by Miss Lonsdale, in the district, will help to bring about the desired effect. The necessary holding of inquests upon illegitimate infants, where no medical help has been obtained, will also be a salutary factor in future in lessening infantile mortality."

The Medical Officer of Health of Coseley under this heading writes :—"In many districts, the employment of mothers away from home tends to neglect and improper feeding of infants,

but this cause is not in operation to any extent here, and the fact that the infantile death-rate is as high as in the large towns in England can only be explained by the want of care and attention displayed by the parents on the children, while still in health, together with inefficient nursing, often in badly-ventilated rooms, when sickness does occur, and until these conditions are removed by the education of the mothers of the poorer classes in the proper feeding and management of infants, this waste of life will continue."

With reference to the effect of infant feeding upon the infant death-rate, the Medical Officer of Health of Handsworth writes:—"Diarrhœa caused 27 deaths, 23 in infants under one year old and two in children from one to five years old. To these should be added the 22 deaths from enteritis, 19 occurring in infants under one year old. Of these deaths, 4 were in June, 12 in July, and 19 in August. Of the 42 fatal cases of diarrhœal disease in infants, 13, or nearly one-third were in Murdoch Ward. In 29 cases where children under one year died of diarrhœal diseases in July and August it was found that only one was breast-fed, the remainder having been fed by means of a bottle. The lessons which are to be learnt from this disastrous experience are—(1) that infants should be fed at the breast if possible; (2) that where cow's milk is used as a substitute for mother's milk, the most rigid precautions should be taken to ensure that the milk, assumed to be delivered in a pure condition, does not become poisonous. This should always be attempted, more especially in hot weather, by bringing the milk to boiling point and then allowing it to cool, protected from dust, in a clean place. Every vessel used in connection with the milk, especially the feeding bottles, should be kept scrupulously clean."

In Heath Town, where the mortality this year amounted to 171, the Medical Officer of Health points out that the figure is too high, and attributes this partly to culpable negligence, and partly to ignorance and poverty.

In Leek, the infant death-rate this year only amounted to 112, which is said to be the lowest figure recorded since 1877.

In Longton, which is in the unenviable position of having the highest infant mortality this year of any of the urban districts in the Administrative County, the Medical Officer of Health writes :—"This infantile mortality question is one which has been constantly brought before you. It is a matter which is to a large extent in the hands of the parents, especially the mothers. The mothers, as a rule, are badly trained in domestic matters, in consequence of going to work in their early years, and in these days there is so little need for the home needle, in consequence of the great facilities for procuring cheap ready-made garments of every description, their spare time is either spent in reading trashy literature and penny dreadfuls, or strolling about if the weather permits. This want of a desire to acquire a knowledge of domestic matters remains with them into womanhood, and when married and become mothers they cannot fill up their time with attention to household duties, for they know not how, and as for the attraction to home that the infant should be it is overpowered by the love of the company they get in the workshops, consequently baby has to be left at home in charge of some old woman or a child; or again, as is very frequently the case, carried often some distance, fine weather or not, to be left in charge of some old dame, who manages to make a small income by taking in such infants, the result being that the infants are deprived of their natural food, and the substitute for it is generally a little bread soaked in weak tea or water with a little sugar; good milk, diluted with a proper proportion of water and sweetened, they very seldom get, and in case an infant becomes troubled with indigestion, which such dieting is sure to lead to, the flatulent pains, causing it to cry very much, are relieved by either a few drops of laudanum or Mother Winslow's Soothing Syrup, which gives temporary relief, but as the cause remains the effects also do, until at last, through the general undermining of the constitution, convulsions or some other serious malady puts in an appearance, and too often such cases terminate in death and so help materially to swell our mortality list."

In Newcastle, where the rate amounted to 200, the excess as compared with the mean in that district is attributed chiefly

to a high mortality from measles, whooping cough, and diarrhœa, but the Medical Officer of Health says:—". . . another cause, I believe, is due to the fact that a large number of mothers are away from their homes during the day, being employed in the various industries peculiar to the district. It is to be hoped that with more knowledge and care exercised on the one hand, and better sanitary surroundings and possibly legislation on the other, the high mortality amongst infants, which exists at the present time, may in the future be prevented."

In referring to the high infant mortality in Quarry Bank, the Medical Officer of Health writes:—"That the true remedy for this lies in the instruction of mothers in the principles of infant nursing and feeding is becoming more recognised every year. Improvident marriages and employment of women in factories away from home have also been proved to have a marked influence on the death-rate among infants, and probably account to some extent for the heavy returns of deaths in your district among premature and congenitally feeble children. The efforts of the Council to diffuse knowledge on infant feeding and nursing, by the house to house distribution of pamphlets, might profitably be supplemented by simple lectures in the district on these and kindred subjects."

In Sedgley, a considerable diminution in the infant mortality has taken place, the figure this year being 140, compared with 188 in 1895. With reference to this the Medical Officer of Health writes:—"The decrease in the deaths from diarrhœa from 35 last year to 18 this year accounts chiefly for the lower infant mortality. Better results are still possible when the wives of working-men learn more about the proper feeding and nursing of infants. The recommendation I made in my last year's report to institute in your district courses of lectures on these subjects has been acted upon by your Technical Instruction Committee, and free Health Lectures have been given, or arranged for, in Sedgley, Upper Gornal, and Lower Gornal. The lecturer is appointed by the County Council, and the lectures already given have been well-attended, and must,

ultimately, lead to more rational methods of feeding and nursing infants and to a still lower infant mortality."

With reference to this subject, the Medical Officer of Health of Stoke-on-Trent writes:—"Many of these valuable lives would be saved if the merest rudiments of hygiene were taught in schools, but the great majority of people have no knowledge of ordinary health matters, and till this is remedied by the spread of education to all, sanitary laws passed by Parliament strive in vain."

The Medical Officer of Health of Tamworth writes:—"I have frequently alluded in previous reports to the various conditions which contribute to a high rate of infant mortality. Among these causes are those of parental neglect, in some instances wilful, and in others due to ignorance of the proper principles of infant feeding and rearing. It is very gratifying to be able to state that under the auspices of the Staffordshire County Council, a course of lectures was given by Miss Parkes, early in the year, at Tamworth and Wigginton. The lectures were well attended and greatly appreciated. In connection with the details of home nursing, first aid, &c., practical demonstrations were given. The lectures included the important subject of the care of children in health and sickness, washing, dressing, feeding a baby, teething, the common diseases and accidents of childhood, diet—what is, and what is not, nourishing food, &c.

"The importance of continuing more widely such a system of teaching cannot be too highly estimated as a means of removing a great deal of lamentable ignorance on the part of mothers and others having the care of infants and young children, and as tending to the saving of life, and reducing the high rate of infant mortality throughout the country."

In Tipton, where the rate this year amounts to 183, the Medical Officer of Health states that it is largely due to preventable causes, and not to culpable neglect, and he looks to education as the means to lower the mortality.

In Tunstall, where the rate is high, the chief causes are said to be improper feeding, careless nursing, and want of cleanliness.

In Wednesbury, measles is said to have been the chief contributing cause, as was the case in Smethwick where diseases of the respiratory organs also contributed.

The Medical Officer of Health of Cannock Rural District in writing under this heading says :—

"The question of the high death-rate in infants and children is a very important one in our industrial district. There appears to be two main causes :—

"(1) Improvident and early marriages—women bearing children before they are physically competent to stand the strain of pregnancy and labour—the same factor often leading to improper and insufficient house accommodation, the children frequently being born prematurely, of stunted growth and delicate constitution.

"(2) Errors in dieting infants and children—solid food being given to children who should live absolutely on milk—potatoes and meat and badly cooked farinaceous food being used too freely.

"The County Council might judiciously institute a house to house distribution of some plain and simple worded instructions to mothers on the best way of feeding their babies, especially pointing out what is injurious for them, what the dangers are of stuffing them with solid food, and what, in a few exceptional cases, may be substituted for milk."

The Council will remember that I conducted an inquiry five years ago into the effect of factory labour on the infant mortality. I give in the following table the original figures for the artisan towns, classified in accordance with the relative proportion of married women engaged in factory work, together with corresponding figures for the past eight years :—

Deaths in Children Under One Year in Three Classes of Artisan Towns in Staffordshire.

	CLASS I. Many women engaged in work.	CLASS II. Fewer women engaged in work.	CLASS III. Practically no women engaged in work.
10 years, 1881-90	195	166	152
8 years, 1889-96	204	174	164

These figures speak for themselves. It will be noticed that although there has been a general increase in the infant death-rate, practically very much the same relative proportion has been maintained between the three classes of towns.

This increase, coincident with an undoubted improvement in the sanitary condition of towns, is, perhaps, the most unsatisfactory feature in the mortality statistics of the County. The infant mortality is considered one of the best tests of sanitary conditions; this being the case, one must look to other causes to explain the growing infant death-rate, but among these causes in this County a prominent place, I fear, must be given to the prevaling practice of mothers leaving their homes to work in factories.

Zymotic Death-rate.

The death-rate from zymotic diseases, including under this heading, according to the Registrar-General's classification, the seven principal ones—namely, small-pox, measles, scarlatina, diphtheria, fevers, whooping cough, and diarrhœa—is higher this year than last, indeed, as regards the Administrative County it is the highest rate yet recorded within the experience of the County Council.

In the following table the comparative figures are given for the past eight years, together with similar figures for England and Wales, and for the larger towns in England.

Zymotic Mortality per 1000 of Population.

	Districts in Administrative County.			England and Wales.	Large towns in England.
	Urban.	Rural.	Urban & Rural combined.		
1889	2·36	1·17	1·99	2·40	2·72
1890	2·06	1·15	1·77	2·05	2·77
1891	2·00	1·36	1·82	1·83	2·41
1892	2·03	1·10	1·77	1·90	2·63
1893	2·41	1·58	2·17	2·47	3·17
1894	1·68	0·97	1·47	1·76	2·43
1895	2·39	1·15	2·04	2·14	2·82
1896	2·71	1·55	2·39	2·18	2·90

On comparing the figures of the individual zymotic diseases for this year with those for 1895, it will be found that the urban districts are chiefly responsible for the increased rate, that it is to diphtheria and measles, more especially, the increase must be attributed, and, in a lesser degree, to scarlet fever and whooping cough. So far as enteric fever and diarrhœa are concerned—both highly preventable diseases—it is satisfactory to note that in place of an increase there has been a decline, except in the case of the rural districts as regards the last-mentioned disease.

The Medical Officer of Health of Burslem, where the zymotic death-rate was high (4·35), points out that this resulted chiefly from the prevalence of measles.

Measles and whooping cough are credited with having caused the high rate at Newcastle (3·75).

As regards Sedgley, the Medical Officer of Health states:—"The past year has unfortunately been a year of epidemics, of which there have been three in your district, viz., measles, scarlet fever, and diphtheria, while typhoid fever has also prevailed since April in well-defined areas. There need be little wonder, therefore, that the zymotic deaths and death-rate are quite exceptional, the deaths numbering 85 and the zymotic death-rate being 5·6 per 1,000, as compared with 46 and 3·06 in 1895, which was the highest record since 1889, when the same total (46) was reached. As regards the health of a community, it must be pointed out that the zymotic death-rate is a popular but very unsafe standard. A high death-rate from enteric fever, diphtheria, or diarrhœa may in general fairly be taken to imply a defective sanitary state. . . . 'Little is known of the determining causes of epidemics of small-pox, measles, whooping cough, and scarlet fever, but their predisposing causes are all widely different, and are, for the most part, not affected by what are known as 'sanitary conditions'. The death-rate due to such a heterogeneous group denotes simply the presence or absence of grave epidemics.'

"Allowing then for measles and scarlet fever according to the passage just quoted from Dr. Whitelegge (p. 523) our zymotic death-rate would be reduced by 2."

In Smallthorne, where the rate amounted to 4·69, measles caused 16 deaths out of a total of 27 in the zymotic class.

Measles is also credited with being the chief cause of high zymotic death-rates in Wednesbury and Smethwick.

In the Lichfield Rural District, whooping cough was unusually prevalent, and caused one half of the deaths from zymotic disease.

In the Walsall Rural District, the zymotic rate (0.97) was lower than in any year during the past ten, with the exception of 1890 and 1894.

Special Zymotic Death-rate.

Small-pox.—It is satisfactory to be able to record that no deaths have resulted this year from this disease, which was so prevalent and fatal two years ago.

The following account by the Medical Officer of Health of Stafford of the measures adopted to prevent the spread of the disease in that town, where three cases occurred, is of interest as showing how much can be done by prompt and energetic measures to cut short an outbreak:—

"Two cases of smallpox occurred simultaneously in a common lodging house, No. 76, Foregate Street, and came to my knowledge on January 14th. Both cases were isolated immediately in hospital, and six men and a child were removed into quarantine and vaccinated. The premises were disinfected, and the landlady and two other women, who declined to go into quarantine, remained on the premises. On February 8th a third case was reported, it being that of a young woman who had gone to the house a fortnight previously, and had contracted the disease from some clothing which had been hidden and so escaped disinfection. She was promptly isolated, and the remaining women, who had previously been vaccinated, were all

removed into quarantine, and the house taken possession of and again disinfected thoroughly. No fresh case occurred. As to the cause of the outbreak, it undoubtedly arose from a child who had stayed in the lodging house, and who was said to be suffering from chicken-pox at the time."

One case occurred in the Cheadle Rural District, the origin of which is not traced. Although the patient was not isolated in hospital, the disease was not communicated to others, owing, it is stated, to the precautionary measures which were taken.

Measles.—This disease, which appears in most years in most districts has, taking the Administrative County as a whole, been twice as prevalent, judging by the death returns, than in 1895.

In the Administrative County, 631 deaths occurred from measles, as compared with 305 in 1895, equal to a rate per 1000 of the population of 0·77, as against 0·37. Of these deaths, 525 occurred in the urban districts, or 0·88 per 1000, and 106 in the rural districts, producing a rate of 0·47 per 1000. In the following table corresponding figures are given for the past eight years:—

MEASLES.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of Deaths...	347	221	368	187	283	183	280	525
	Rate per 1000.....	0·64	0·40	0·67	0·33	0·50	0·32	0·48	0·88
Rural	Number of Deaths...	66	37	106	20	111	39	25	106
	Rate per 1000.....	0·26	0·14	0·44	0·08	0·48	0·17	0·11	0·47

In Bilston, the cases are said to have been fewer and of a milder type than in 1895.

In Brownhills, the disease was very prevalent throughout the year, and for a time all the schools were closed, it is said, with good effect.

With regard to the effect of school closure in limiting the spread of the disease, the Medical Officer of Health of Cannock Urban District writes as follows:—"In the latter part of January an outbreak of measles occurred at Chadsmoor and

Hightown, and on January 30th there were 361 absentees out of a total of 1042 scholars in the Chadsmoor National and Board Schools, which fact, combined with the medical evidence of the prevalence of measles, determined me to advise closure of the schools for four weeks. The Sunday schools of this district were also closed by my request. In March the disease spread into Green Heath in the Hednesford Ward. The West Hill Board Schools, and the Temporary Infants' School in Bradbury Lane, and Sunday schools, were closed for a period of six weeks. In April the Walsall Road Board Schools, the Cannock Endowed Infants' and National Schools, in the Cannock Ward, were closed for four weeks, owing to the prevalence of the disease there, and in June the Heath Hayes Infants' and Temporary Infants' Schools were likewise closed for three weeks. Church Hill and Littleworth, in the Hednesford Ward, were also visited by the disease, but not to the extent of justifying school closure. As shown in the report, there were 25 fatal cases, giving a death-rate of 1·13 per 1000, the secondary cause of death being generally bronchitis and pneumonia. It has been contended that school closure as a preventative is of little use, but I believe in a district like this it is a means of checking the spread of the disease. There are two sources of difficulty to contend with in the prevention of this disease, which justifies school closure, viz. :—

"(1) That infection begins at least three days before the rash appears.

"(2) That there is usually an incubation period of twelve days, necessitating a fortnight's quarantine before those exposed to infection can be considered safe. Home isolation being impossible, it is not right that we should multiply these difficulties by allowing children to be sent to school from homes scattered over various portions of the district, these homes subsequently forming separate foci of disease."

As illustrating this point, and also to show how much assistance School Board Attendance Officers may afford the Health Authority of a district, I quote the following from the report

of the Medical Officer of Health of Handsworth:—"This disease is not notifiable in this district, but the School Board Attendance Officers, by order of their Board, notify weekly any cases of infectious disease which they may find. Towards the end of 1895 measles was prevalent in the district, but apparently abated at the beginning of the year. Mr. Hodges, our inspector of nuisances, wrote to me as follows:—'during the last week in January, 1896, an outbreak of measles occurred among the children attending St. James' Schools, Brewery Street. On February 3rd and 4th over 50 cases were investigated, and on visiting the schools on February 5th, I learned that there were 70 boys, 61 girls, and 80 infants, making a total of 211 children absent on account of the disease being present in their homes. The number of absentees was increased to 250 on February 6th, the average attendance at the school being 580. It was then determined to close all departments of the school for three weeks from February 7th. When the schools were re-opened there was a full average attendance; the disease appeared to have died out during the time the schools were closed, very few cases having been reported since then.' Since I took up the office at end of March, 1896, there have been few cases of measles."

Under the heading of measles the Medical Officer of Health of Rowley Regis writes:—"The heavy mortality from this disease may, in a great measure, be accounted for by the fact that many people regard measles as a very trivial disease, and one that all must or should have; consequently, the children are allowed to run about and expose themselves to cold without much interference on the part of their parents, with the result that bronchitis, pneumonia, and other chest and throat affections are contracted. In reality it is a very dangerous and fatal disease and requires quite as much care in treatment as scarlet fever or any other zymotic disease."

The Medical Officer of Health of Sedgley writes:—"To this disease (which caused only one death in 1895) are attributed 23 deaths in 1896, *i.e.*, more than one-fourth of the total of zymotic deaths. It was of a very severe type, prevailed

during March, April, May, and affected chiefly Lower Gornal and Gornal Wood, although Sedgley and Upper Gornal suffered, but to a less extent. In many houses of the poor the sufferers could not be kept warm owing to defective chimneys and fire-places, and thus pneumonia and other chest complications were induced—frequently with fatal effect. This disease is but slightly affected by 'sanitary conditions,' and it must be discounted in considering our unusually high zymotic death-rate.

The Medical Officer of Health of Wednesbury, where measles was very prevalent and fatal in 1896, goes very fully into the question, and from his remarks I quote the following with reference to school closure and the isolation of cases:—"The only step which was taken to check the spread of the disease was to close the schools. Only nine deaths had been registered as due to measles, when on February the 14th I wrote to the Clerk of the Wednesbury School Board recommending the closure of the schools. The Wesleyan Schools on the Holyhead Road, and those of St. Bartholomew's, had already been closed by the school authorities acting upon their own responsibility, and I endorsed their action. The beneficial result of this wholesale closure, which was put in force for two weeks as an experiment, was never manifested, and I may say that I never expected it would be. Success in some country districts in arresting epidemics of measles appears to have followed notification, followed by the prompt closing of the schools. But this may be all very well in a sparse population. It is far otherwise in a densely-populated district where the means of spread are numerous, and where even if the schools be closed, the children during their absence from school play together in the little houses or crowded courts and alleys, to an extent which differs little from their congregation in a schoolroom. So it happened, and as I have already stated, that whereas at the time the schools were closed only nine deaths had resulted from measles, 42 additional deaths occurred later, and that without any temporary check in the rate of mortality. It was only my powerlessness in the matter in other directions, combined with my anxiety to do something, that led me to take a step which

from the onset promised no success. Apart altogether from the children playing together at home, there is another means by which the disease is widely spread. I allude to the large number of small general shops scattered amongst the community. Over and over again I have attended children suffering from measles and scarlatina at the back of these little shops, the mother acting both as shopkeeper and as sick nurse. The shop consists merely of the small front parlour converted so as to contain a small stock of a variety of articles of food and clothing. Is there room for wonder that the disease spread? Add to all this a few miserable pawn shops through which at such a time must circulate a quantity of infected clothing; and it may be understood without difficulty that closing the schools has a very limited effect upon the course of such an epidemic. Yet to talk of the isolation of measles is considered almost ridiculous by many persons who would be the most panic stricken if the fifty deaths had been due to small-pox instead of measles. I have previously pointed out that even if hospital accommodation does not prevent the spread of the disease in the case of measles, at any rate in that way mortality may be greatly lessened. I have only now to add that the mere mortality of a preventable disease must not alone be considered. It is to be borne in mind that ophthalmia, deafness, and tubercular diseases, are so common after measles as to be a more or less definite sequelæ."

Among other urban districts where the disease was very prevalent, may be mentioned Leek and Longton.

Among the rural districts where the disease was very prevalent are Leek, Lichfield, and Tutbury.

The Medical Officer of Health of Tutbury writes with regard to preventive measures, as follows:—

"Special difficulties are attached to the prevention of measles—First, its extremely infectious character, especially in its earlier stages, before an accurate diagnosis of the complaint can be made; secondly, the disposition of the public in general to lightly estimate its dangers and importance; and early closure of schools (including of course Sunday

schools), and the prevention of the assemblage of children for any object (worship, amusement, &c.) whatever.

"Compulsory notification might be attended by good results, but the benefit which attaches to the notification of scarlet fever could hardly be attained in this disease, the reason being (as I have already said) that it is infectious during the early stages before its exact nature is made out; and then again its dangers not being sufficiently realized, many cases are not medically attended. 'It is only measles' being far too common an expression.

"As a matter of fact, of recent years, taking the country generally, measles has caused more deaths than scarlet fever, small-pox, or diphtheria."

Scarlet Fever.—In the Administrative County, 186 deaths occurred from scarlet fever, as compared with 185 in 1895, equal to a rate per 1000 of the population of 0·22 as against 0·23. Of these deaths, 143 occurred in the urban districts, or 0·24 per 1000, and 43 in the rural districts, producing a rate of 0·19 per 1000. In the following table corresponding figures are given for the past eight years:—

SCARLET FEVER.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of Deaths...	108	145	144	105	119	101	142	143
	Rate per 1000.....	0·20	0·26	0·25	0·18	0·21	0·17	0·24	0·24
Rural	Number of Deaths...	30	51	63	29	27	29	43	43
	Rate per 1000.....	0·12	0·19	0·26	0·12	0·11	0·12	0·19	0·19

In Brierley Hill, where the disease has been prevalent in mild form for four years past, 53 cases were notified, and it does not appear from the returns that any of these were isolated in hospital, although the Medical Officer of Health points out that such isolation is the only method of stamping out the disease in all cases where home isolation is impossible.

In Burslem, where 184 cases were notified, only 29 were isolated in hospital, and the Medical Officer of Health says:—"I find there is still much prejudice shewn by parents against the removal of infected children to the hospital."

I quote the following from the report of the Medical Officer of Health of Coseley, to shew how such a disease is spread, and the importance of providing hospital accommodation as a prevention :—" As I pointed out in my last annual report, this disease has been endemic in the district for several years. This year, however, there has been a large increase in the number of cases notified, which are as follows :—

January	6	July	38
February	6	August	40
March...	17	September ...	37
April	14	October	22
May	6	November... ...	34
June	26	December... ...	12

" This is a total of 258 cases, occurring in 176 houses in all parts of the district. The largest number of cases were notified from the Ettingshall district, but the deaths, which number 26, were evenly distributed throughout the different localities in proportion to their populations, and gives a mortality of 10 per cent. on cases notified, thus :—

Coseley Proper ...	Population,	6,988 ...	Deaths,	9
Brierley	,,	6,276 ...	,,	8
Ettingshall ...	,,	6,391 ...	,,	8
Woodsetton ...	,,	2,244 ...	,,	1

" In my report for the month of March, I noted that this disease was on the increase, and the cases on the average more severe, and on my suggestion a letter was sent to the various school managers asking them to request their teachers to be extra vigilant in observing the health of the children. In each case I visit the premises and give instructions to the parents to keep their children from school, and in addition, I have thought it advisable to notify to the head masters when infectious disease occurs in the homes of their scholars. The following circumstances, which I reported at the time, illustrate the extreme disregard of the public for the safety of others. On the 21st February I was called to see a child whom I found to be suffering from scarlet fever. On the occasion of this first

visit, several children of neighbours were in the house in company with the sick child. I gave the mother strict instructions to keep the case isolated. On 21st March I saw the child (who was still under my care) in the street, under circumstances that made me feel sure he was on the point of proceeding to Sunday School with several other children. That this kind of thing is continually going on there is no doubt, but it is seldom such a direct disregard of instructions can be proved. Owing to the prevalence of this and other infectious diseases, I deemed it advisable to recommend the closure for three weeks of the Board Schools at Hurst Hill early in December. This was done, and prior to re-opening their disinfection was carried out. The number of cases reported from that district has since shown a marked reduction. Previous to recommending closure of these schools, I obtained a list from the head master of children absent on a certain day, and on visiting at the homes of those who had not been notified as suffering from infectious disease, I discovered several unnotified cases of scarlet fever. One child had returned to school, but as the account her mother gave me led me to believe she had had scarlet fever, I proceeded to the school, and on examining her found her 'peeling' on both feet as a result of the disease. These cases I also reported in full at the time. In mild cases it is impossible to get the people to observe adequate precautions, and in many of the houses it is impracticable to get efficient disinfections carried out. Many of the cases are kept in the downstair's room in the day time for convenience of nursing, or sometimes because men at night-work would be disturbed in getting their day's rest were the cases nursed upstairs. The continual mingling of the healthy with the sick, consequent on these conditions, presents the best possible arrangements for the spread of the disease, and when it is remembered that the rate of mortality in some epidemics is three times greater than it has been in this district during the year, it is evident that the possibilities which the continued prevalence of

this disease presents are alarming, and as it is chiefly in this connection that the provision of an isolation hospital concern us, I would beg to point out some of the advantages to be derived therefrom :—

"1. Restriction of the spread of the disease by the removal of the first case in each house.

"2. Consequent reduction of the cost of notification.

"3. Better nursing of cases in more healthy surroundings, giving greater chance of recovery.

"4. Long confinement to one room unnecessary.

"5. Attendance at school of the other children can be resumed almost directly, instead of having to be excluded for six weeks, causing loss of education to the children and of grant to the school authorities.

"As this question must soon receive attention, I would mention that an isolation hospital to be properly equipped, a disinfecting apparatus and ambulance should be provided at the same time."

In Newcastle Urban District the year is said to have been one of the most satisfactory on record as regards the absence of this disease.

The Medical Officer of Health of Stone writes concerning the value of isolation in this disease as follows :— "The earlier cases notified to me were at once removed to the Isolation Hospital at Yarnfield, and in no single instance was there any return of the disease in the homes from which they were removed. I can point to many instances where a child in the first stage of it has been removed from a household of other children and the fever has not spread."

In Stafford, as usual, hospital isolation was very thorough, for, of 101 cases which occurred in 80 houses, 89 per cent. were isolated.

The Medical Officer of Health of Tettenhall, in referring to the danger of contagion in scarlet fever, says :—"It may be

remarked that in some cases in which every attention was paid to desquamation of the skin, discharges from the ear were overlooked. In two cases at least discharge from the ear in children, otherwise well, was credited as the source of infection in others."

As illustrating the influence of school attendance upon the spread of scarlet fever, I quote the following from the Report of the Medical Officer of Health of Smethwick:—"In June, finding that many of the children notified to be suffering from scarlet fever were either attending the Cape Board Schools, or resident in houses where some of the children were so attending, I began to suspect that there was some undiscovered source of infection in the schools, by whose agency the fever was being spread. I therefore spent two afternoons in examining every child in the schools, and in a general investigation, with the result of discovering more than a dozen children in attendance who presented undoubted symptoms of the fever, and whose presence amongst the other scholars was highly dangerous to them. These children were all forthwith sent home and instructed by the teachers, who afforded me every assistance in my inquiry, to tell their parents to seek medical advice, and to say that they would not be re-admitted without the production of a medical certificate. In a few instances, only, was there any compliance with this advice, there appearing to be a disposition generally to debit measles, which had so recently and so widely prevailed with the original indisposition, and further, as the inquiries I pursued in the homes of these children revealed, the initial symptoms had in most instances been so slight that they escaped observation. My opinion and consequential action, however, received sufficient corroborative evidence to justify them through the notifications that did follow, and the subsequent occurrence of further cases in the suspected households, and from the fact that very shortly afterwards scarlet fever ceased from troubling the schools in question. I am not able to assert that the increase of scarlet fever this year is attributable to this localized incidence, but the fact remains that nearly

one-half of the total cases notified were located in the South-Eastern Sub-District, or in closely adjacent portions of the Southern Sub-District more or less immediately within the sphere of the infected schools, and further, the notification returns show a marked augmentation in the number of outbreaks at the very period when these investigations took place, and an appreciable decline following on the preventive measures that were adopted."

Among other urban districts where the disease was more or less prevalent during the year may be mentioned Biddulph, Bilston, Darlaston, Handsworth, Lichfield, Rowley Regis, and Rugeley.

In the Eccleshall Division of the Stone Rural District the closure of schools and the prompt isolation of cases are credited with having prevented a very widespread epidemic. Here, also, successful proceedings were taken under circumstances described by the Medical Officer of Health as follows:—"Having heard that one of the children of the family had been away from school ill, for a week, I went to the schools, where I found two other children of the same family attending school regularly. On going to the home, one child was found in the peeling stage, and one with the rash well out, and the mother out washing in a neighbour's house. No medical man had been called in. The matter being brought before your Council, an order was made to take legal proceedings in the case against the mother for not giving notice of the disease. The case was heard at Eccleshall, the Magistrates convicting the woman and ordering a small fine and payment of costs. I think this action has had a good effect in letting parents know the necessity of notifying, and shewing that the excuse of ignorance on the ground that no medical man was called in does not relieve them of responsibility."

The Medical Officer of Health of Seisdon Rural District writes as follows:—"Where isolation could not be provided the patients were at once removed to the temporary isolation hospital, or, no doubt, the schools would have been closed for many weeks, and the number of cases much more numerous."

Diphtheria.—In the Administrative County 161 deaths occurred from diphtheria, as compared with 93 in 1895, equal to a rate per 1000 of the population of 0·19, as against 0·11. Of these deaths 131 occurred in the urban districts, or 0·22 per 1000, and 30 in the rural districts, producing a rate of 0·13 per 1000. In the following table corresponding figures are given for the past eight years :—

DIPHTHERIA.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of Deaths...	27	23	37	32	24	47	65	131
	Rate per 1000.....	0·05	0·04	0·06	0·05	0·04	0·08	0·11	0·22
Rural	Number of Deaths...	28	14	25	21	18	34	28	30
	Rate per 1000.....	0·11	0·05	0·10	0·09	0·08	0·15	0·12	0·13

The Medical Officer of Health of Handsworth writes :— "Our experience this year, 25 deaths from diphtheria and membranous croup, will, I hope, lead all concerned to strive to prevent the spread of the infection. It is but sorry consolation to learn that our neighbours have suffered equally with ourselves. One great difficulty in attacking this great and growing incidence of diphtheria in urban districts is due to the impossibility of recognising doubtful cases without bacteriological aid. With your assistance I hope to overcome this difficulty in the near future, so that medical practitioners may, in any doubtful case, have the question decided within 24 hours."

In Heath Town, where ten cases occurred, four of which proved fatal, the houses in which the first cases appeared are said to have been very filthy, with mud and water in the cellars.

In Longton, where 92 cases occurred, 21 of which proved fatal, the Medical Officer of Health attributes the origin, in certain parts of the district, to the rapid erection of rows of houses upon insanitary sites, and expresses a hope that the result of his calling attention to this will be that greater care will be exercised in sanctioning the erection of houses on such site.

The Medical Officer of Health of Sedgley, where the disease appears to have been very prevalent, writes :—" In last year's report I was able to state that your district had suffered only slightly from this disease, although it was more than usually prevalent in the country and neighbourhood. Till the end of July in 1896, there were only 11 cases notified, but from August onwards, and especially in the last three months of the year, it spread with great rapidity over every part of your district, there being a total of 231 notifications with 15 deaths during the year. During the previous *five years* only 21 cases were notified. Damp houses, cold and wet weather, and foul gases from sewers or drains are recognised by the most competent authorities as favouring the spread, if they are not the actual causes of the disease, although 'many cases of diphtheria occur in premises in which no defect can be found.' The weather of the past autumn was unfortunately favourable to the spread of diphtheria, while damp houses are only too common, much of the property being very old. One great cause of dampness in the houses is the absence of spouting of any kind to catch the rain-water. Other diseases besides diphtheria are thus fostered, *e.g.*, phthisis and rheumatism, both of which are too common in our midst. In the new Bye-laws under this Council's consideration, I beg to recommend that powers be obtained to remedy this obvious defect. The worst spots in your district attacked by diphtheria I pointed out to your Sanitary Committee in November, and they decided on sanitary improvements, which, when carried out, will be beneficial to the districts visited, viz., Ruiton, Hermit's Row, Cricket Meadow, and Jew's Lane."

I would point out with reference to the suggestion that Bye-laws should be adopted, enabling the District Council to remedy these defects and absence of spouting in houses, that ample powers already exist in the Public Health Act and Housing of the Working Classes Act to effect this purpose.

In Stafford, after an almost entire absence of this disease for some years, four cases were reported in 1895 and nineteen in 1896. In attempting to explain this the Medical Officer of

Health writes:—"It may be noted, as perhaps being of some significance, that the incidence and prevalence of diphtheria occurred at the time when the main sewers were being laid. It has been observed in other towns, where main sewers have been laid, that diseases of a low type followed the opening of the ground and consequent disturbance of the ground air. In Stafford the ground air must have been disturbed to an unusual degree by the constant pumping which was carried on to lower the height of the subsoil water."

In discussing the origin of 17 cases at Coseley, the Medical Officer of Health points out that, almost without exception, no insanitary conditions could be found in the houses of those affected. The Medical Officer of Health of Smethwick also found this to be so in the case of 32 persons attacked. On the other hand, the Medical Officer of Health of Rowley Regis, in discussing the causes in the case of ten families, states that "the disease in all cases was associated with insanitary conditions."

In Willenhall, where six cases occurred in six different houses, in one case the infection was supposed by the Medical Officer of Health to have been communicated by fowls suffering from "roup."

Among the other urban districts in which special mention is made of this disease may be mentioned those of Biddulph, Bilston, Cannock, Rugeley, and Tettenhall.

As regards the rural districts, the reports, as a rule, contain very little reference to this disease.

Whooping Cough.—In the Administrative County, 320 deaths occurred from whooping cough, as compared with 224 in 1895, equal to a rate per 1000 of the population of 0·39, as against 0·27. Of these deaths, 261 occurred in urban districts, or 0·44 per 1000, and 59 in rural districts, producing a rate of 0·26 per 1000. In the following table corresponding figures are given for the past eight years:—

WHOOPING COUGH.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of deaths....	261	211	222	420	171	252	175	261
	Rate per 1000.....	0·48	0·38	0·40	0·75	0·30	0·44	0·30	0·44
Rural	Number of deaths....	39	68	39	90	33	38	49	59
	Rate per 1000.....	0.11	0·26	0·16	0·39	0·14	0·16	0·22	0·26

In Bilston, where 17 deaths occurred from this disease, the Medical Officer of Health states that this is the highest mortality of any year during the past decade, with the exception of 1892.

In Tipton, where 28 deaths resulted from this disease, the Medical Officer of Health points out that it is the largest number which occurred in one year during the past ten years.

In Cannock Rural District, the Medical Officer of Health states that the disease contributed chiefly to the zymotic death-rate.

Enteric Fever.—This disease, which must be looked upon as entirely preventable, caused 140 deaths, as against 148 in 1895, equal to a rate of 0·17 as compared with 0·18. Of these, 118 occurred in urban, and 22 in rural districts, equalling a rate respectively of 0·20 and 0·09. In the following table corresponding figures are shown for the past eight years:—

ENTERIC FEVER.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of deaths....	106	74	111	85	117	77	129	118
	Rate per 1000.....	0·20	0·13	0·21	0·15	0·20	0·13	0·22	0·20
Rural	Number of deaths....	26	34	35	24	32	18	19	22
	Rate per 1000.....	0·10	0·13	0·12	0·10	0·13	0·08	0·08	0·09

It will be seen by reference to the tables at the end of this Report that according to the mortality returns the districts that suffered most are the following, enumerated in order, the highest being placed first:—Sedgley, Heath Town, Smallthorne, Tipton, and Quarry Bank Urban Districts; and Blore Heath, Tamworth, and Newcastle Rural Districts.

In those reports in which the causation is discussed, polluted water and defective drainage, as a rule, are credited with it. As the accounts of such outbreaks indicate pretty well the sanitary conditions met with in the respective districts, I propose to quote fairly fully from the remarks of the Medical Officers of Health in discussing the probable origin of the disease in their districts.

The Medical Officer of Health of Audley refers to the benefit of preventive measures in the case of this disease in the following terms:—"Typhoid fever has occurred in two houses during the year. In one case the disease was imported into the district by a servant returning home ill. From the earliest stage of the case strict sanitary precautions were taken, and there was no spread of the disease to other members of the family. In a second case, a man contracted the disease which ran its usual course, and being unrecognised was not notified to me. As a consequence no precautions were taken to prevent the spread of the disease and four other members of the family were affected. As the period separating the first case from the others was five weeks, there is every reason to believe that the disease was conveyed from the man to the rest of the family, and that the extension might have been readily prevented. These cases were brought under my notice by the family calling upon me as Medical Officer to investigate the disease from which they were suffering."

The following history, which appears in the report of the Medical Officer of Health of Bilston, is interesting, as shewing the possibility that the disease may be communicated by shell fish:—"It is well-known that the micro organisms of this disease can be conveyed to the human system not only through drinking water, milk, &c., but also by the consumption of certain articles of food, and particularly of oysters, mussels, &c., that have been living on sewage beds or in their neighbourhood. The following account is most instructive and deserving of being placed on record:—

"On October 6th a case of typhoid fever was notified in High Street. On enquiry it was found that the patient was a

young lady who had just returned from Blackpool, and after much difficulty it was ascertained that she and thirteen others had been staying together at a certain lodging-house in that town. The patient, with two other ladies and her brother, during their stay partook of a quantity of mussels. Shortly afterwards they were seized with vomiting, and became so ill that they determined to return home. Three came to Bilston, and the fourth—a lady—went to Birkenhead. Two of the persons recovered in a few days, but in the case of the other two—one the young lady in High Street, and the other the lady at Birkenhead—the illness developed into typhoid fever. The young lady here recovered after some weeks, but her mother, who nursed her, contracted the disease and died. The lady at Birkenhead also recovered in time, but her mother, who nursed her, and two others also contracted the disease, and again, unfortunately, the mother succumbed, while the others recovered.

"These facts were forwarded to Dr. Jasper Anderson, the Medical Officer of Health for Blackpool, who in reply wrote to me as follows:—

'The valuable information you give me confirms the conclusions which I had already arrived at. I may state that in the latter half of October there were at least six cases of typhoid fever caused by eating mussels whilst in a raw condition, which had been collected from a bed where sewage contamination was probable. There were also a few other cases which were possibly due to the same cause. I at once wrote letters to the newspapers, and had notice boards placed up on the gathering grounds warning the public against eating such mussels. I have not the slightest doubt that your cases contracted typhoid fever from eating mussels. The matter has already been before our Committee, and measures have been taken during the last season, and more effective measures will have to be taken next.'"

In discussing certain cases which occurred at Brierley Hill, the Medical Officer of Health writes as follows:—"The most serious outbreak occurred in April at Alma Terrace, Bank

Street, seven cases being notified in one week at this row of buildings. They were all removed to the isolation hospital and recovered. Two of these cases would most certainly have died if they had not been promptly removed to the hospital. Alma Terrace is a row of back-to-back houses, consisting of one living-room and one bedroom for each tenement—much too small for occupation. I condemned these houses, and advised their conversion into single tenements with through ventilation. This suggestion has not, up to the present, been adopted, owing to the disturbance from mining operations, but it should not be lost sight of. The property is supplied with South Staffordshire water. The drainage and closets were very unsatisfactory. The houses were ordered to be closed and the nuisances complained of abated before they were re-occupied.

"The other cases notified were scattered about the district. One case occurred at Lower Potter Street, at a house supplied by water from a well. A case had occurred on the same property in 1893. At that time I made an analysis of the water, and reported it as polluted with sewage and unfit for use. Notice was then given to put on the company's water, but it was disregarded, the result being another case in August, 1896, which fortunately recovered. It was a serious oversight to permit the use of this water to continue after the warning I had given. The South Staffordshire water has now been laid on to these premises. The old well should be closed to prevent its further use.

"In the other cases where the company's water was in use, it is abundantly proved that there are other important factors to be considered, such as damp dwellings, over-crowding, saturation and pollution of the soil and atmosphere from badly-constructed closets and defective drainage, and where such insanitary conditions exist there will always be increased liability to this type of fever and disease."

Such occurrences as these should not be possible if Authorities discharged their duties efficiently.

In Fenton, the Medical Officer of Health anticipates that a great reduction in the number of enteric cases will take place

when the work of substituting water-closets for defective privies, which is now being pushed on, is completed.

The Medical Officer of Health of Quarry Bank states that prompt isolation, and the correction of contaminated water-supplies, has been attended with the most satisfactory results. He writes as follows :—" By the removal and prevention of nuisances, the closing of polluted water supplies, and the prompt isolation of the attacked, this disease, admitted to be one of the most preventable of the zymotic group, should be permanently banished from the district. As elsewhere stated, the Council has been very energetic in these matters, but even now nuisances exist which cannot be rectified without considerable structural alterations, notably, uncovered and deeply sunk middens, which are almost the rule, and constitute the most insanitary feature of the district. The time has arrived when a thorough and detailed enquiry into the evils and remedy of the present system should be made, and with the single exception of the size of the receptacle, which might be somewhat increased, the specifications in the bye-laws as to privy, midden, and drain construction, ought to be applied to all new buildings, and as occasions arise to existing ones. With the immediate prospect of a general sewerage scheme, and the possible adoption partially or entirely of the water-carriage system, all structural alterations carried out should be such as to allow of a ready conversion of privies into water-closets, and of middens into receptacles for ashes and dry refuse only. In all probability the adoption of water-closets will sooner or latter be made compulsory in all urban districts, and as the simplest and most commendable solution of the sewage disposal diffiulty, I strongly urge the Council to consider what steps should be taken in connection with the new sewerage scheme to facilitate its early and general adoption."

The following remarks in the report of the Medical Officer of Health of Willenhall are introduced as shewing the importance of isolation and disinfection in the case of enteric fever, and should move the Willenhall District Council to provide an efficient disinfector, and consider favourably some scheme to provide an isolation hospital :—" With regard to the Russell

Street and Doctor's Piece cases, six in number, five appear to have been contracted from the first case. Three of these cases lay upon the same bed, which, after the first case, was taken to the disinfecting apparatus; but when the other cases broke out, as the Council know I distrust the provisions made for disinfection, I advised the bed to be burnt. The cause of the Bray Street cases, four in number, was clearly traced and removed; whilst the evidence is clear enough for practical purposes to assume that the origin of seven of the Froysell Street cases was a case not notified as typhoid fever, which, however, beyond all doubt, manifested many of the symptoms of typhoid fever. A careful perusal of the appendix cannot fail to convince the Council how valuable an isolation hospital would have been in some of the cases, notably, in first cases in any given locality and in cases in the households of small retail shopkeepers and milk vendors."

Among other urban district reports in which fairly full details are given of enteric outbreaks may be mentioned Biddulph, Coseley, Heath Town, Rowley Regis, and Tipton.

The Medical Officer of Health of Newcastle Urban District congratulates his Council on the favourable record compared with previous years, only eight cases of the disease having been notified.

As regards rural districts, the following extract from the report of the Medical Officer of Health of Cheadle is well worthy of the serious attention of the District Council, and should be considered in the light of proper drainage schemes for the places mentioned:—"I made a thorough investigation of each case as it came under notice, and was able to make out, in most instances, the most probable cause of the outbreak.

"As unsanitary conditions recognized, were the following:—untrapped drains in connection with cesspools, full of decomposing filth. This was so in one or two of the cases that broke out in Cheadle. At Alton a similar state of things existed, only the drain opened directly into the main sewer of the village. The sewer-gas that gained entrance into the dwelling in this way was easily detected by the sense of smell, and at Alton the stench in the house was at times unbearable.

"At Bottom House, I found the privy cesspool and the pig-stye in close proximity to the dwelling, and also to a well of water used for drinking purposes. The overflow from the cesspool ran into an open stagnant sewer (also close to the dwelling) on to the adjacent land. The premises had no system of drainage, and during the wet weather the cellar was flooded with water from the surrounding saturated sub-soil. With these unsanitary conditions there was little wonder at the outbreak. Notices were served on the landlord to have the necessary alterations attended to."

The Medical Officer of Health of Lichfield Rural District points out that the cases which occurred in that district were usually associated with badly-trapped or open drains, defective privies, ground saturated with impurities, and other insanitary surroundings.

The Medical Officer of Health of Walsall Rural District writes :—"One of the most pleasing features of my report is the remarkable decrease in the number of cases of typhoid or enteric fever as compared with last year, there having been only three notified during the year, against 24 in 1895, when it will be remembered we had a serious outbreak at Pelsall and Heath End."

Typhus Fever.—It is satisfactory to be able to record that no mention of this disease appears in any of the reports under review.

Diarrhœa.—In the Administrative County, 513 deaths occurred from diarrhœa, as compared with 684 in 1895, equal to a rate of 0·62 as compared with 0·85. Of these, 423 occurred in urban, and 90 in rural districts, equalling a rate respectively of 0·71 and 0·39. In the following table corresponding figures are shown for the past eight years :—

DIARRHŒA.		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Urban	Number of deaths...	431	454	208	301	632	210	592	423
	Rate per 1000.....	0·82	0·82	0·38	0·54	1·12	0·36	1·02	0·71
Rural	Number of deaths...	98	91	65	65	129	60	92	90
	Rate per 1000.....	0·40	0·35	0·27	0·28	0·56	0·26	0·41	0·39

Diarrhœa is a disease which is very variable as regards its prevalence, as the temperature in the summer months is intimately associated with its causation. At the same time, although climatic conditions are intimately associated with the ailment, its prevalence is largely influenced by the presence or absence of insanitary surroundings, and the amount of discretion shown in the feeding of infants, for it is essentially an infantile affection.

The Medical Officers of Health of Bilston and Rowley Regis both point out that this disease was not so prevalent as in 1895.

The Medical Officer of Health of Sedgley, in calling attention to the comparative freedom from this disease, points out that only 18 deaths were caused by it this year, compared with 35 in 1895.

The Medical Officer of Health of Short Heath mentions the fact that the district was singularly free both from adult and infantile diarrhœa.

The Medical Officer of Health of Tipton writes :—" There has been a marked decrease in the number of deaths from diarrhœa, 18 deaths only having been recorded against 42 deaths last year, and an average of 24·5 for the past ten years. One case only was an adult, no case of choleraic diarrhœa has been reported. The decrease is somewhat remarkable ; because, for some reasons, the mortality rate for the past six years from diarrhœa has been very high and has caused me much anxiety ; 7 of the deaths were in the hottest part of the summer, the other deaths were fairly distributed through the year. Diarrhœa is due to so many causes, preventable in many cases, but often present as a symptom of other grave intestinal disorders which are quite outside of our control and cannot be prevented ; where there is a high birth-rate there must of necessity be a high rate of mortality from diarrhœa, and this will continue till mothers learn how to feed their children properly, and sanitary authorities insist upon dry dwellings, pure air, and pure water as being a necessity."

Cholera.—No mention is made of this disease in any of the reports under review.

Erysipelas.—Little reference is made to this disease in any of the reports.

It will be seen from the table at the end of this Report that, compared with other districts, whether urban or rural, the number of erysipelas cases notified in Newcastle Rural District is very large. This appears to be invariably the case, and the figures are so remarkable that the District Council would do well to instruct their Medical Officer of Health to enquire into the probable cause. There must be some exceptional cause in operation in the Newcastle Rural District when one finds that the number of such cases notified in that district are eight or nine times greater than in the other rural districts in the Administrative County.

Puerperal Fever.—In the Administrative County, 33 deaths were attributed to puerperal fever as against 26 in 1895. In a few only of the reports is any special reference made to the circumstances attending the cases.

Concerning two fatal cases which occurred in Tipton the Medical Officer of Heath writes as follows:—"On investigating the case I found that the same midwife had lost two other confinement cases from the same cause when acting in an adjoining parish. I at once prohibited her from attending any more cases of confinement for one month. In the second case there was great doubt about the case, the woman had died after a miscarriage; the coroner intervened and ordered that a *post-mortem* examination should be made; this was done, with the result that it was proved that she died from child-bed fever."

The Medical Officer of Health of Smethwick writes:—"Two cases, against four last year, were notified, and one death was registered from this disease. Considering the fact that a large number of women are confined without the assistance of a doctor, and that the presiding genius on these occasions is either a neighbour hastily summoned

from her domestic duties, or a self-styled mid-wife, whose only guidance is the rule of thumb, it is remarkable that so few cases of this child-bed fever are notified. In the present instance, one woman, aged 24, was prematurely confined, and it was not until two weeks of serious illness had elapsed that a doctor was called in—too late. The other, aged 40, had been confined of her thirteenth child, and throughout had the benefit of conscientious and skilful professional attendance."

Influenza.—In my last year's Report I was able to state that this disease, although prevalent, had not prevailed to such a serious extent, nor was it so fatal as in former years. It would appear from the reports under review that a still further decline, both in the number and the severity of the cases, has taken place, although it attacked most of the districts.

The Medical Officer of Health of Rowley Regis writes as follows:—"The district has not been free from this disease all through the year. Eight deaths have been registered, all over five years of age. It has been most fatal in the Old Hill Ward. It did not assume the epidemic form which was so marked a feature in the previous five years. A considerable number of cases occurred, chiefly among children, between the middle of October and the end of December; they were spread over the whole district. It was complicated with bronchitis broncho-pneumonia, and frequently was accompanied with a rash, closely resembling scarlet fever in its early stage. The rash disappeared, as a rule, within from twenty-four to thirty-six hours."

With regard to the infectiousness of influenza, the Medical Officer of Wednesbury writes as follows:—"So far as my observation goes there is no more infectious disease than influenza, and of such diseases, none with more far-reaching and distressing consequences. Unfortunately, at present little is really known respecting the influenza poison,

and probably as little concerning the best method for checking its spread. Perhaps one of the most trying features of the disease is that one attack, instead of conferring immunity from a second, appears to render an individual more than ever liable to successive attacks."

Diseases of the Respiratory Organs.—Under this heading, which does not include phthisis, there is a slight decrease in the number of deaths in the Administrative County compared with 1895, the figures being 2,734, as compared with 2,802.

The following description, which appears in the report of the Medical Officer of Health of Cheadle Rural District, is of interest:—

"A severe outbreak of epidemic pneumonia occurred in the last quarter of the year in the village of Tean, some details of which I am able to give through the courtesy of Dr. Davis, who attended the cases.

"The first case broke out in the month of October, and ended in recovery. This case was followed by 16 others, which broke out in November, resulting in 11 recoveries and 5 deaths. In December, 10 other cases came under treatment, with 9 recoveries and 1 death. It will thus be seen that in the three months there were no fewer than 27 cases under notice, with 21 recoveries and 6 deaths.

"Of the persons attacked there were 19 males and 8 females, all being adults, with ages ranging from 25 to 75 years.

"With two exceptions (two in each house), only one member of a household was attacked. The onset of the disease was generally very sudden (the incubation period being only two or three days) and at the time of the medical man's first visit the temperature had reached 104° to 105°, with the physical signs of acute croupous pneumonia (red hepatization stage).

"With regard to the cause of the outbreak, it has been suggested that the flesh of an animal which had suffered from

pleuro-pneumonia had been eaten. This theory has not been proved, and whatever the actual cause was, there is little doubt that certain insanitary conditions exist in the village, which act as powerful predisposing causes."

In Biddulph Urban District, it appears that the Authority have agreed to the recommendation of their Medical Officer of Health that houses shall be disinfected after deaths from phthisis.

Concerning phthisis, the Medical Officer of Health of Cannock Urban District writes as follows:—"This fatal disease may justly be regarded as preventable. It has an established relationship to dampness of soil and density of population. Compared with other industrial districts, we are comparatively free from phthisis, though not so free as we should be. The coal dust inhaled by the miner is not so irritating and injurious to the bronchial passages as other kinds of trade dust. The natural elevation of the district with its dry gravelly subsoil are favourable to the reduction of the disease. Foul air is a most potent cause in the production of phthisis, and if in this district there were less overcrowding in houses, and a cessation of oil-lamp burning in bedrooms which have no fireplaces, or else the latter are stopped up, impeding ventilation, we should find the death-rate from phthisis lower than what it is. It is a wise precaution to boil cows' milk before consumption, especially when the source of the milk is unknown, and might possibly be tubercular."

Zymotic Disease Prevention.

Notification.—I am pleased to say two districts are now added to the list of those where the Compulsory Notification of Infectious Diseases Act was already in force, namely, Uttoxeter Urban and Rural.* The addition of these two places to the list adds 12,227 to the population which is now under the Act, and brings the total up to 738,969. In the following districts, with a total population of 77,137, the Act has not yet been adopted:—

Short Heath, Urban.	Tipton, Urban.
Smallthorne ,,	Wednesbury, Urban.

Leek, Rural.

* The Uttoxeter Urban District was only constituted this year; previously it formed part of the Rural District.

In former reports I have pointed out the advantages of the Act, and it is difficult to understand why certain Authorities still hesitate to adopt it. It is certainly not for want of advice on the part of their own Medical Officers, and one can hardly suppose that expense acts as a deterrent.

I give the following figures, which show the average cost per 1000 of the inhabitants for each of the past seven years in districts where the Act has been in force:—1890, 18s. 6d.; 1891, £1 8s. 9d.; 1892, 18s. 4d.; 1893, £1 5s. 10d.; 1894, £1 1s. 7d.; 1895, £1 2s. 8d.; 1896, £1 3s. 6d.

Tables with reference to the working of this Act are introduced at the end of this Report.

In those districts where the Act is in force, it continues to operate with entire absence of friction, and there is a general concensus of opinion as to its great value, even in districts where hospital accommodation is not yet available.

With regard to the districts where the Act is not in force, the Medical Officers of Health, without exception, urge its adoption.

In dealing with zymotic disease in the Short Heath Urban District, the Medical Officer of Health says:—"With regard to five of the cases of scarlet fever, three of diphtheria, and one of typhoid fever in Sneyd Lane, I made an investigation to the best of my ability; but, as the Council has been unwilling to adopt the Notification Act, and medical men are less willing than they used to be to give me by courtesy the desired information, because the Council has now power to acquire that information for its officers by a small payment, I received no intimation concerning them until all had died or recovered."

This report also concludes with the following paragraph:—"In conclusion let me once again advise the Council to adopt the Notification Act ere it is made compulsory by a greater power; and, whilst considering in what way they can benefit their friends and neighbours, let them bear in mind that sanitation in the last fifty years has increased the mean duration of life in England 'nearly four years for males and

more than five years for females,' a fact which ought to encourage still greater efforts, and which should increase the trust of the public in the guardians of the public health, and conciliate those who are constantly opposed to public expenditure, mainly because they fail to understand that it is for the public good."

It appears that the Tipton District Council have again formally considered the adoption of the Act, and determined not to adopt it.

The Medical Officer of Health of Smallthorne writes:—"I would again draw your attention to the small chance we have of successfully combating the spread of these zymotic diseases. The Compulsory Notification Act is not in force; we have no hospital and we have no means of disinfection. At a meeting at which I was present, *re* Notification Act, it was resolved, after discussion, not to adopt it, mainly, I take it, on the score of expense. In Dr. Reid's Annual Report is given a table, shewing cost of Notification per one thousand of population, and taking for example the neighbouring town of Leek, the cost is shewn to be 10s. 10d."

The Medical Officer of Health of Wednesbury writes:—"I feel it my duty to repeat my annual remarks upon two matters, viz.:—the notification of infectious disease and the isolation hospital. Until such time as the Act is adopted for the compulsory notification of infectious disease, it is impossible for the Health Authority to judge of the proportions assumed by infectious disease, and when any steps have been taken to check the spread of such disease, no information can be obtained as to the efficacy or otherwise of such steps, excepting the cases notified by the medical men of the town."

The Medical Officer of Health of Leek Rural District writes:—"The Notification Act has not been adopted in the district. At present the means by which the officers of the Sanitary Authority obtain information of the presence of infectious disease in the district are:—

1.—By the goodwill of medical men who practice in the district.

2.—From the District Registrars (from the latter only as a rule after death has occurred).

3.—By the observation of the School Attendance Officer, who is also the Sanitary Inspector."

Isolation and Disinfection.—In most of the reports, both for urban and rural districts, this question is very fully dealt with.

In the table at the end of this Report, headed "Result of the working of the Compulsory Notification of Infectious Diseases Act," figures are given showing to what extent isolation hospitals are made use of in districts where they exist. It will be noticed that the use made of them varies very considerably, and in most cases it is evident that they can be of little practical value in curtailing epidemics—the chief purpose for which they are intended. In some instances it would appear that patients object to go to them on the ground that the accommodation provided is not satisfactory. In other cases in which difficulty is experienced the Authorities themselves seem to be responsible, owing to the fact that they take too limited a view of their responsibilities, and impose a hindrance to the isolation of infectious cases by making a charge for the admission to hospital of all persons who are not paupers—for example, in the case of Tipton.

The percentage of infectious cases isolated in urban districts where hospitals are available, and have been available during the whole year, varies very much—from *nil* in the case of Brownhills and Cannock, to 100 per cent in Tamworth, and 85·5 per cent in Tamworth Rural District.

The aim of sanitary authorities should be to isolate all cases where isolation cannot efficiently be carried out at home, and these constitute nearly the whole. A glance at the first column of the table referred to will show the position of each district as regards percentage of cases isolated in hospital to total cases, both in urban and rural districts where the Notification Act is in force.

In view of the action of the Council it is desirable that I should quote pretty fully under this heading from the reports

under review, in order to indicate the feeling in the various districts regarding this important matter.

The Medical Officer of Health of Audley writes:—"I would again point out that the absence of both isolation hospital and disinfecting apparatus renders it very difficult to efficiently deal with an outbreak of scarlet fever."

It appears that the Authority have had the question of providing a hospital, jointly with Newcastle Urban and Rural Districts, under consideration, but that negotiations in this direction with the respective authorities have failed.

The Medical Officer of Health of Biddulph has substituted sulphur fumigation for "sanitas oil" in the case of room disinfection. He also advocates perchloride spray in preference to sulphur, but his council have not yet adopted this recommendation.

The Medical Officer of Health of Brierley Hill states that the isolation hospital has proved most useful in the case of enteric fever.

The Medical Officer of Fenton states that a disinfecting apparatus is much needed for that district.

The Medical Officer of Health of Lichfield writes:—"The question of erecting an infectious hospital in a more central and accessible position, where the nursing and isolation accommodation would be, in every respect satisfactory, and where cases of two or more of the more dangerous infectious diseases, in either sex, might be removed for treatment at any time, is now under consideration. The additional outlay would, of course, have to be considerable, but it would be shared by three authorities, and it is believed that the additional advantages to be gained, would be quite commensurate with the cost. The present building could then be made to fulfil every purpose as a small-pox hospital, which, by means of our ambulance van, might be made available for a considerable area."

The Medical Officer of Health of Quarry Bank writes as follows:—"From extensive observations in various parts of the country, it is becoming more and more certain that the pro-

tection afforded by isolation at home, and the ordinary means of disinfection by fumigation, is, at the most, doubtful. The indifference of the working classes to the risk of infection for themselves and their families, and the limited number of rooms in their houses, often render utterly futile the efforts of the most careful and vigilant sanitary committee and its staff; whereas, if the first case or the first few cases in a district could be removed and isolated, and a careful supervision of the infected household maintained for a few days, an epidemic might often be averted. . . . . .

"The isolation hospital, originally intended for small-pox, has, in the absence of this disease, been again used for enteric fever patients. There were cases from Quarry Bank from January 1st to April 8th, and from December 3rd to the present time; and from Brierley Hill there were cases in April, May, and June. The advantages of hospital treatment are now so appreciated by the poorer classes, that in most instances they were anxious for admission, the only cases which remained outside being such as were sufficiently isolated at home, or in which their medical attendant did not deem removal advisable."

The Medical Officer of Health of Rowley Regis writes:—"Up to March 25th the same measures were carried out, at the public cost, as mentioned in my previous report, especially after scarlet fever, viz., stripping off wall-paper, washing the walls and ceiling with a solution of carbolic acid, and, afterwards, whitewashing the same, and disinfecting the clothes, bedding, &c., at the steam disinfector. After this date the Council decided that all disinfection (except fumigation by sulphur) should be done at the householder's cost, and that it should not be compulsory. Consequently, we have now reverted to our old system, viz., visiting each case as soon as possible after notification, supplying disinfectants, issuing a circular warning patients against exposing themselves in public before they are free from the disease and before the house and clothing have been fumigated, removing all small-pox cases to hospital, prevention of children from infected houses attending school, attention to the water supply of the district, and the cleansing of drains and water-courses.

"This apparently retrograde step was decided upon, the Council being of opinion that any further system of disinfection could not be carried out sufficiently completely, on account of so many people frustrating the efforts of the Council by their deplorable ignorance of, and opposition to, all matters respecting disinfection, the Council fully recognising that disinfection, unless thorough, was practically useless."

In this district a conviction was obtained against a parent for sending his son to school while suffering from scarlet fever, after being cautioned by the Sanitary Inspector, and a fine of 40/- and costs was imposed.

The Medical Officer of Health of Rugeley writes:— "Isolation at home was attempted in every case where circumstances permitted it, and that it was in many instances effectual, is I think, proved by the comparatively few instances (7 out of 72) in which two cases occurred in the same house. At the same time there were cases in which the want of an isolation hospital was especially felt, and indeed was so apparent that the District Council at once determined to make a decisive move in the matter. To this end a proposal was made to the Parish Councils of Brereton and Colton to join Rugeley in forming a small area for isolation purposes, and to build a hospital on a suitable and convenient site, having regard to distance from the three districts. The plan commended itself to me, inasmuch as a small area means a saving of time and distance in the removal of patients, and also the not so very improbable liability of parents concealing the early cases of disease from a not unnatural repugnance to their children being removed to such a distance as to render information of them difficult to obtain. Such concealment would of course defeat the object for which isolation hospitals are intended, viz., the prompt removal of first cases of disease. Brereton and Colton, however, did not see the matter in this light, and the District Council then decided to approach the County Council, and enquire whether it would consider favourably an application under the Isolation Hospitals Act, 1893, for the formation of an area for isolation purposes, and to this end

sent a deputation to wait on the Clerk and Medical Officer, who, after discussing the matter, promised to bring it before the Council without delay, and so the matter stands at present. I have, however, reason to hope that a scheme will be devised which will place Rugeley in possession of means of isolation so perfect, at such a cost, and in a position so convenient, that any question of distance, such as I have alluded to, would be dissipated."

The remarks of the Medical Officer of Health of Sedgley on this subject have already been referred to under the heading of scarlet fever; this is also the case as regards Smallthorne.

The Medical Officer of Health of Stone, where a temporary hospital has been provided for the joint use of the Urban and Rural Districts, states that extra wards are much needed, so as to allow of the treatment of more than one disease. He also urges his Authority to provide a disinfecting apparatus.

As regards the administration of the Tamworth Joint Hospital, and improvements carried out and proposed, the Medical Officer of Health writes as follows:—"Out of the total of 181 cases, three deaths occurred, viz., one from scarlet fever, and two from diphtheria. Among this large number of cases of scarlet fever, there were many who on admission were seriously ill, but who derived great benefit by removal from small cottages to the large airy wards of the hospital, together with the advantages of skilled nursing. Only once during the year was it necessary to engage an additional nurse for a period of five weeks. The whole of the care and management of the patients devolved on the hospital nurse, who discharged her duties in a very satisfactory manner.

"During the month of September the number of patients averaged 42 per week, severely taxing the accommodation and resources of the hospital, and rendering it impossible to take in all the cases from the parish in which the disease was most prevalent. All other cases breaking out in other parts of the district were, however, able to be at once admitted.

"The Joint Board, for the purpose of carrying out the improvements needed for the better working of the hospital, 'resolved to expend the sum of £750, for the purpose of purchasing a disinfector, an ambulance carriage, the erection of disinfecting rooms, an ambulance carriage-house, a bathing-house, laundry, storeroom, dairy, and coal houses.'

"Mr. Clarson prepared plans for the additional buildings and alterations, and I attended with him at the offices of the Local Government Board when the plans were submitted and approved. Subsequently, Mr. Williams' tender for the work, for the sum of £460, was accepted.

"A Thresh's disinfector and an Atkinson & Phillips' ambulance brougham have been purchased. The proper treatment and thorough disinfection of the cases will be now more properly carried out.

"The administration of the hospital during the year was carried on in a satisfactory manner by the staff."

The Medical Officer of Health of Tipton writes as follows:—"If we used—as we do not—our isolation hospitals more frequently to seclude the first cases in an impending epidemic, the incidence of the epidemic would probably be stayed; as a rule separation of the sick from the healthy is done too late, and the task of stopping an epidemic in full swing is impossible.

"To make the hospital more effectual for preventing the spread of epidemic disease, the first few cases should be sent in at once. When an epidemic is raging sanitary measures cannot stop it, but the steps then taken are useful to prevent a succeeding epidemic. We do not make so much use of our infectious hospital as we ought, and this arises in a great measure from the fear that it is very costly to go there. Although greatly in favour of the hospital being absolutely free, I know that each individual case has been generously met by the Council, who reserve to themselves the right of charging. We also suffer from red tapeism. When admitting paupers, the rule now enforced is—(1) I must have a note from the medical attendant saying that the case should be removed.

(2) I have to apply to the relieving officer for a note of admission, which he cannot give until the patient has become a pauper chargeable to the parish. (3) He then makes the patient a pauper by giving him some outdoor relief; this done (4) he sends me an order, and I have then to send a car and arrange for his admission into the hospital. Whilst all this is going on the patient is lying in most instances very improperly nursed; he is also contaminating the atmosphere and increasing the risk of communicating it to others."

In Tunstall, where 75 cases of scarlet fever were notified, of which three cases only were isolated, the Medical Officer of Health states:—"I have been very anxious to isolate more of the cases of scarlatina, but still find it difficult to overcome the prejudices of parents. Every precaution, as far as practicable, in the homes of the parents, has been adopted to prevent spreading of these diseases."

The Medical Officer of Health of Wednesbury writes:—"Another year has gone by, but the perennial question of an isolation hospital remains unsolved. This much, however, has been done—on June 17th the Mayor of Wednesbury (Mr. John Knowles), with the Town Clerk (Mr. Geo. Rose) and myself, attended a conference of representatives of the various Health Authorities of South Staffordshire. Our main object in attending this conference was to decide for or against joint action for purpose of isolation. Having heard the matter discussed we decided upon separate action, independent of any scheme adopted by the neighbours. From then onwards to December nothing further was done. Upon the 8th of that month, however, the Health Committee and its Officers inspected a site situated in Sparrows Forge Lane, and later I was requested to report as to its suitability or otherwise as a hospital site for the isolation of infectious disease. This stage having been reached it is to be hoped that the Authority will press the matter forward, so that as soon as possible a properly equipped hospital may render us prepared for any emergency. Up to the present time we have relied upon nothing but our immunity from any serious epidemic—an immunity which

cannot be expected to continue indefinitely. Of course the disease that threatens us most is small-pox—and more than ever is this true now that the law in reference to vaccination has become a dead letter. It will be seen by reference to the figures always given that of 859 births registered during the year ending June 30th, only 216, or 25 per cent were vaccinated. If this state of things should continue, just so surely as night succeeds day will it happen that an epidemic of small-pox will break out, and so any day our hospital may be required. Considering that the evidence taken before the members of the Vaccination Commission was overwhelmingly in favour of vaccination, it becomes almost incomprehensible how political expediency and other such considerations should have led those concerned in the inquiry to allow such persons as objected to vaccination not only to expose their children to the dangers of small-pox, but also, by neglecting vaccination in their own families, to menace the safety of the community generally."

The Medical Officer of Health of Willenhall urges his Authority to provide a proper disinfecting apparatus, and points out that certain bedding had to be destroyed in consequence of his want of faith in the efficiency of the present apparatus.

The Medical Officer of Health of Cheadle Rural District recommends cottages in place of a central hospital owing to the scattered nature of the district.

The Medical Officer of Health of Mayfield writes:—"I must again call your attention to the want of some means of isolation in the district, as some of the cottages are so small as to render it absolutely impossible to isolate any case of infectious disease in them. As to what means should be provided, I am still of opinion that the plan I suggested in my last annual report would be most suitable to the district."

The suggestion referred to was the provision of cottages in different parts of the district rather than a central hospital.

The Medical Officer of Health of Tutbury Rural District writes:—"I would remind your Authority that the provision

of a hospital for infectious diseases (apart from small-pox) is of the utmost importance. An adequate expenditure in this direction being, I am convinced, the truest economy. At present it is most difficult to ensure efficient isolation in the houses of the poorer classes. But this matter is, I believe, engaging the attention of a sub-committee of your Council, and in the near future the district will, I trust, be provided with this necessary adjunct to the means at our disposal in dealing with preventable disease."

Vaccination.—In many of the reports attention is directed to the inefficient manner in which vaccination is performed. This, I regret to say, is not entirely owing to opposition on the part of the public, but is too often the result of dishonesty in the case of certain practitioners. Possibly legislation, which doubtless will follow on the Report of the Vaccination Commission, may effect a much-needed reform in this direction.

The Medical Officer of Health of Rowley Regis writes:—"I am sorry to see that the number of unvaccinated children is considerably in excess of that for the previous year, and the old complaint still holds good of the inefficient manner in which a number of children are vaccinated. It has been repeatedly demonstrated in every epidemic of small-pox throughout the country that vaccination, to be efficient as a protective agent, must result in three or more pocks; and I cannot too strongly state my opinion that vaccination, in one or two places only, is not merely practically an evasion of the law, but confers no real and lasting benefit on the child."

As regards Rugeley, the Medical Officer of Health writes:—"With regard to the quality of the vaccination, I can say that at public vaccinations, four vesicles are always aimed at, in accordance with Local Government Board requirements, and in nearly every instance obtained. In private practice I am not able to speak so certainly, but I believe that three or four vesicles are the rule. Humanised lymph is principally used, both in public and private practice,

but calf lymph is occasionally employed at the request of parents. I am unable to give figures to show to what extent. No cases of insusceptibility to the virus have been returned to my knowledge."

The Medical Officer of Health of Short Heath writes:— "As there were 136 births last year and 130 the year before, and only 43 children were successfully vaccinated in 1896, the Vaccination Acts do not appear to be sufficiently enforced. The Report of the Royal Commission on Vaccination is thoroughly favourable to the views I have always expressed, that both vaccination and re-vaccination are powerful factors in reducing the prevalence of and mortality from small-pox. I therefore advise the Council to petition the Guardians to fulfil what is beyond all doubt their statutory duty, quite irrespective of any opinions they may personally hold, namely, to see that the Vaccination Laws are complied with."

The Medical Officer of Health of Wednesfield writes:— "Since the Report of the Royal Commission on Vaccination was issued, nothing but calf lymph has been used here, in accordance with the recommendations therein contained, and with the most gratifying results, as the parents of the children are beginning to realise the superiority of this plan over the older method of arm-to-arm vaccination, and do not seem so much afraid of bad results following, in the shape of inflamed arms or tiresome skin diseases, and so have more confidence in the operation, and so come up in increasing numbers. It seems rather an anomaly that the prevention of all other diseases but small-pox should be controlled by sanitary authorities, and that almost the chief of all should be in the hands of Boards of Guardians. It is the opinion of many Medical Officers of Health, as well as my own, that this should be remedied so as to place the prevention of all diseases under one authority only."

The remarks of the Medical Officer of Health of Willenhall on this subject are so striking that I quote them *in extenso*, as follows:—"As the number of children born in the district annually exceeds 650, and only 276 were successfully vaccinated

last year, after making allowance for deaths of infants, it follows that the statutory duty of the Guardians to enforce vaccination is being neglected, and further, that parents are evading a plain duty.

"It is difficult to understand such apathy after the terrible lesson of suffering from small-pox experienced in 1894, and the cost which I don't in the least degree doubt exceeded £10,000. Speaking as a practical man, with an experience of both small-pox and vaccination that only falls to the lot of a few, there is nothing of which I am more convinced than that efficient vaccination diminishes the liability to be attacked by small-pox; that it modifies the disease and renders it less fatal; and that when by lapse of years its protective power has diminished, re-vaccination restores the protection. Can the Council do anything to get parents to have their children vaccinated without resort to compulsion?

"During the last century the average yearly mortality from small-pox per million living was over 2,000. There was a rapid fall in the number of deaths in every country as soon as vaccination became common. The mortality in England in the 22 years from 1873 to 1894 was 53 per million living, while for the 10 years 1885 to 1894, it was 26—the law enforcing vaccination dates from 1871. In Prussia, where vaccination and re-vaccination are compulsory, the deaths have fallen to 7 per million. In Sweden the fall has been from 2,035 to 155. In Austria, where vaccination is permissive but not compulsory, the annual number of deaths per million living between 1847 and 1882 was 580. In Belgium, where vaccination is permissive but not compulsory, between 1875 and 1884 the annual number per million was 441. And in Italy the mean-rate before it became compulsory was 440 in its chief towns, since conpulsory, 1890 to 1894, it was 100, or for all Italy 110.*

"The Royal Commission on vaccination, after an exhaustive inquiry extending over seven years, issued their report in 1896. Here are some extracts from it:—'The State ought to continue to promote the vaccination of the people.' They are not

* Authority—Jenner Centenary Number of British Medical Journal.

prepared to recommend that the State should cease to require vaccination and trust entirely to a voluntary adoption of the practice. 'It is better for the child and better for the community that it should be vaccinated than that it should remain unvaccinated.' 'A parent can have no inherent right . . . to prevent or neglect its vaccination.' 'We are quite alive to the protective value of general re-vaccination.' 'It should be in every way encouraged.' 'We think steps should be taken to impress on parents the importance of having their children re-vaccinated not later than at the age of 12 years.' Whilst apparently of opinion that the ultimate end which the State should hold in view, the vaccination of the greatest possible number, they think the present law does not secure this end. They desire to 'secure that vaccination should be as widespread as possible,' and to stimulate 'belief in the efficacy of vaccination.' 'In our opinion the State is bound to see that a supply of calf lymph is within the reach of every vaccinator.'

"The French War Minister in 1889 wrote to the President of the French Republic:—'I could not forget that in the year 1870-71, while the German Army, with a million of vaccinated men, lost only 459 from small-pox, the less numerous French Army lost 23,400—a loss which would have been saved to France by the careful carrying out of obligatory re-vaccination. Does not this represent quite an army in itself?'

"Let me now invite the Council and all my fellow-townsmen to read the story of the Gloucester epidemic of smallpox in 1896, as told by Dr. Bond, a copy of which I send herewith, and another copy of which I will send to the Free Library. Dr. Bond shows how, in the hour of peril, 36,000 were vaccinated in a period of eight months, and how Gloucester from being one of the worst vaccinated towns in the country become one of the best vaccinated, at a cost to subdue the epidemic of at least £150,000. He says:—'Probably no record exists of so rapid, so extensive, and so momentous a conversion on any matter not directly connected with a question of religious belief.' And in his comparison of the epidemics of small-pox at Gloucester in 1896 (2,035 cases, deaths 426), and at Willen-

hall in 1894 (842 cases, deaths 47), he asks what was the cause of a fatality at Gloucester of 21·3 per cent., whilst at Willenhall it was only 5·6? And he replies: 'Obviously the great preponderance—at Willenhall—of vaccinated cases, amongst whom the fatality was only 2·3 per cent.' 'Viewed in regard to the proportion of the total population affected, these two epidemics were nearly equally severe; but when severity is estimated by *fatality*, the Gloucester epidemic was four times as severe as that of Willenhall.' 'The explanation of the mildness of the Willenhall epidemic, therefore, so far as the vaccinated are alone concerned, may confidently be referred to the prevalence of effective vaccination in the district up to about 10 or 12 years before the outbreak.' 'It enables us to estimate the risk which such a population as that of Willenhall runs of incurring a much greater disaster than it actually did, by an explosive outburst such as occurred at Gloucester, and against which there is absolutely no protection except the enforcement of infant vaccination; since, even the provision of hospital accommodation on a scale which few local authorities would have the courage to institute or maintain, would of itself be useless without the co-operation of a rigid and universal system of compulsory isolation, which even the opponents of vaccination have not ventured to advocate as an alternative to it.'

"In conclusion, I would express the hope that in any changes which the Government may decide to introduce in the laws relating to vaccination, they will either keep the carrying out of the law under direct Imperial control, or at any rate will make it impossible for small electorates to be swayed by noisy agitators in opposition to the Imperial will, whatever that will may be."

The Medical Officer of Health of the Cannock Rural District states that many of last year's arrears have been cleared off, and that better results are now obtained by means of the personal visits of the Vaccination Officer.

Insanitary Dwellings and Overcrowding.

In would appear from the reports under review that the provisions of the Housing of the Working Classes Act, 1890,

and the Public Health Act, 1875, in regard to insanitary dwellings, are receiving increased attention; still, there is room for greater activity on the part of Authorities of rural districts in condemning insanitary property.

In Brierley Hill, 21 houses were closed; 13 of these were repaired, and the remaining eight were permanently closed in consequence of mining operations.

In Coseley, the Medical Officer of Health states that there are many dilapidated and unhealthy houses, but recommends their gradual rather than their general condemnation. It appears that one house which was condemned in 1894 is still occupied.

In Quarry Bank, owing to the absence of spouting and proper drainage, many of the houses are damp and unhealthy.

In Rugeley, a few houses have been closed, and the Medical Officer of Health states that, when sufficient houses have been built to supply the wants of the working classes, he shall feel it his duty to advise the closure of others.

In Sedgley, certain houses, which were reported unfit for habitation, have been rendered habitable, but the Medical Officer of Health points out that there is need for increased house accommodation.

In the Tamworth Urban District, a number of houses in Bradbury Square were specially reported upon by the Medical Officer of Health, and instructions were given to the Surveyor to prepare a scheme for the improvement of the area in question under Part II., Section 39, of the Housing of the Working Classes Act, 1890.

The Medical Officer of Health of Tunstall writes:—"Considerable attention has been given during the year to repairing the dilapidated property mentioned in my last report, and I have also to report the closing of 23 houses during the year, as being unfit for habitation."

In the Willenhall Urban District, the special house-to-house inspection, which was commenced in 1895, has been completed. The facts noted are set forth in a table which is

attached to the report, and the Medical Officer of Health states that much useful work has resulted from the inspection, although much still remains to be done. With reference to certain property in the town, the report states:—"A special report was made on the condition of several properties in Brick-kiln Street and New Street, in which I said:—'Nothing short of an improvement scheme for the re-arrangement and re-construction of the houses and the abolition of the courts can make this part of the district thoroughly satisfactory.' 'There are numerous other courts near to those described, only a little better than they are.' The Council hestitate to close any but the most dilapidated and insanitary houses, because there are not enough houses for the inhabitants, and they cannot see their way, financially, to undertake a general improvement scheme. Plans have been presented, designed to make matters a little better, but property-owners in this part must clearly understand that, if they fail to do their duty in putting and keeping their properties in repair and good sanitary order, their houses are likely to be condemned before long as unfit for habitation. Would it not be wisdom on their part to raise the rent and make matters better?"

In the Eccleshall Rural District, the Medical Officer of Health says that much still remains to be done in remedying dilapidated houses.

The Medical Officer of Health of the Newcastle Rural District, in discussing the question of zymotic disease, says:—"The great majority of zymotic and infectious diseases continue to be chiefly confined to the crowded and populous colliery centres of Madeley and Leycett, and to a much smaller extent in the adjoining parish of Keele. Speaking generally, the other parts of the district are in a fairly satisfactory condition as far as the health rate is concerned. But in the places above mentioned, more especially Madeley and Madeley Heath Districts, the general insanitary surroundings are very bad, and, in their present condition, likely to be powerful causes in the dissemination of infectious disease and other forms of sickness."

In dealing with the question of overcrowding, the Medical Officer of Health of the Walsall Rural District says:—"Eleven cases of overcrowding of those brought under my notice by the Inspector were dealt with by formal notice or otherwise, and in each case the nuisance was abated without legal proceedings. In spite of the improvement in trade there is a tendency for this evil to increase, and it is a difficult question at times to deal with. When the nuisance is got rid of in one case it shows itself in another. I am sure it does not depend on the scarcity of houses. The chief contributing causes are early marriages, large families, and the state of trade. When the latter is bad, often two families live together in the same house for the sake of economy."

Excrement and Refuse Disposal.

I have called attention in my preliminary remarks to the satisfactory advance which has taken place in the system of dealing with the excrement and refuse of districts. This subject has received considerable attention in my previous reports, but as it is one of such supreme importance, from a health point of view, I propose to notice, very fully, the paragraphs in the reports under review which deal with it.

In Biddulph, where the scavenging is carried out by contract, the Medical Officer of Health says the work is not done as regularly or as thoroughly as it should be.

In Bilston, the ashpits in a large number of cases are said to be too large, and many are wet from slop-water being emptied into them.

Under this heading the Medical Officer of Health of Brierley Hill writes:—"In my last annual report I asked you to consider the desirability of taking this important work into your own hands, as I had good reason to be dissatisfied with the Contractor's work during the year.

"You did not adopt my suggestion, but you appointed your contractor for a period of three years instead of annually, as had been the custom hitherto.

"So far, this plan appears to have obtained better results. The contractor has not been able to keep the number of complaints down to the level that I think it necessary, and as he had, in fact, undertaken to do, but a far less number of complaints of inattention have reached me, and I have found him very prompt in attending to any cases I brought to his notice. This is a great improvement over my experience of the previous year.

"The improvement may be due to the new system of contract, but I think it is mainly due to the greater attention which the Sanitary Committee has given to this department, and I hope they will continue to exercise the same diligence in supervising and inquiring into the manner in which the contractor is doing his work.

"In my last annual report I also drew your attention to the insanitary condition of many of the closets and ashpits.

"Here again I am glad to be able to say that the Sanitary Committee has endeavoured to make some improvement. During the year 166 notices have been served upon owners to remedy the defects I mentioned, and a large amount of good and useful work has been the result. Your inspector reports that the whole 166 notices have been attended to, and the nuisances abated.

"The contractor still, however, complains of having to empty some very wet ashpits, which are a great hindrance to his work. Wherever such conditions do exist, the owners should be compelled to remove them, not only to assist the contractor—whose complaints should always be considered important, because he has better opportunities of knowing where these defects lie—but also for the sake of the occupiers and their neighbours, to whom such places are a serious danger at the time the cleansing is going on."

The Medical Officer of Health of Brownhills writes:—"Year by year I am the more convinced that the Council should take into their own hands the removal of the ashpit refuse. At present this is far from being punctually and

thoroughly done. When done the refuse is cast down by the contractor on the nearest place that can be found, oftener than not on the common, forming a great eyesore to the people, and constituting a distinct menace to the health of the district. Why it should be compulsory to remove the night-soil before a certain hour in the morning, and dump it down a few yards off for ever, in places frequently traversed by the inhabitants, is an anomaly I fail to comprehend. I would strongly urge the provision of an isolated place for its disposal, where neither sight nor health would be offended."

In Burslem, the refuse removal is said to be conducted in a fairly satisfactory manner. Here also the substitution of water-closets for old privies is said to have effected a great improvement so far as the work has gone.

The Medical Officer of Health of Coseley writes:—"In the course of inspection during the year, I found that defective and unwholesome closet and ashpit accommodation, as I have pointed out in my monthly reports, is very general in the district. In many cases sufficient accommodation is not provided, this remark applying especially to ashpits, and where these do exist, in many cases their construction is most rudimentary. All ashpits should be water-tight both above and below, and properly ventilated. As regards the closets, faulty brickwork, and leaking cesspits with defective coverings, are often met with, and where these conditions exist in small backyards in close proximity to the houses, the danger to the inhabitants is evident. Owing to the carelessness of many of the tenants, these matters require the constant supervision of the inspector, whose duties are rendered unnecesarily heavy, and I would urge that the staff at his command should be substantially and permanently increased, so that a more systematic and frequent removal of night-soil and ashes may be undertaken. When this is arranged for, reduction in the size of privy cesspits should be aimed at."

In Handsworth, it appears that 214 privies were converted into water-closets during the year on formal "notice," and many were so converted without such notice.

In Kidsgrove, where refuse removal is now in the hands of the Authority, the work is said to be done in a more satisfactory manner.

The Medical Officer of Health of Longton writes :—" Privy cesspools when out of order are replaced by water-closets or slop-pans, and all new houses are required to be supplied with water-closets or slop-pans. There are now in the Borough 2,084 water-closets and slop-pans, as against 1,613 in 1895, being an increase of 471.

" The ashpits are, in a great number of cases, covered in, and all new ones are constructed of smaller dimensions."

In Newcastle, it is said that the scavenging is better done, and the old cesspool system is being abolished.

In Quarry Bank, where there are many foul closets and ashpits, the contracting system is said to be unsatisfactory.

The Medical Officer of Heath of Rowley Regis writes :—" The same system is in existence as in former years, but the work of removal has been done more satisfactorily. The sites for tips are becoming very scarce, and are causing the Council much anxiety, both on account of their scarcity and of the probability of their giving rise to unsanitary conditions in the immediate neighbourhood. The Council is endeavouring at the present moment to arrive at the best method of securing the adoption of a water-carriage system throughout the district so as to dispose of the night-soil through the sewers. This, in my opinion, is the most rational way of removal, although I feel sure that whatever system be adopted, whether it be slop water-closets or the more elaborate flush water-closet system, considerable difficulty and expense will be incurred in educating the people up to the use and not abuse of the same."

The Medical Officer of Health of Rugeley writes :—" With regard to ashpits, I can only repeat what I stated last year, that before the district can be said to be in the satisfactory state of cleanliness which the Public Health Act contemplates, it is clearly necessary that a number of old ashpits in various parts of the town should be reduced in size, roofed in, and

otherwise made to comply with the provisions of the bye-laws. The Inspector of Nuisances reports that, on the whole, the ashes have been removed regularly and well throughout the year, but that the failure of occupiers in some parts of the town, notably Floodgate, to give due notice that their ashpits require emptying, causes him much trouble and inconvenience. Fourteen privies have been converted into water-closets during the year, making 42 in all since the public water-supply started."

The Medical Officer of Heath of Smethwick writes :— " Without a doubt the contractor for the removal of privy and ashpit contents has honestly endeavoured to fulfil his obligations, and has, on the whole, succeeded in dealing, in a manner that will be satisfactory to reasonable persons, with his task. Of course there have been, as there always will be, complaints, but practically all grievances have, on careful enquiry, been shown to have been needlessly occasioned, and to have resulted on omissions, on the part of the parties themselves, to give the Sanitary Inspector timely notice. I am quite sure that he, and the contractor, desire to obviate, to the best of their ability, any nuisance or annoyance occasioned by delayed scavenging. The remedy lies in the hands of the public, and if people will only take the trouble to personally acquaint the Inspector of their needs a little in anticipation of the actual necessity, instead of drawing the attention of the landlords and rent collectors to them, and relying on their assistance, much individual inconvenience would be avoided, and the routine of sanitary work facilitated, while at the same time the district generally would be rendered altogether more wholesome."

In Smallthorne, the scavenging is said to be better done, although there is still room for improvement. Many complaints are made of the nuisance which it creates, and it is suggested that it should be done during the night, and in a more cleanly manner.

The Medical Officer of Health of Stone writes :—" The majority of the houses are still on the tub-system, but in some few instances during the year tubs have been replaced by

water-closets. In all new houses water-closets have been insisted upon. The cost of the pail-system is considerable, and when the drainage works are complete, an effort should be made to do away with it. In all cases where privy-middens are in existence, water-closets should be at once enforced."

The Medical Officer of Health of Stoke-on-Trent writes:—"I again strongly recommend the Committee to insist upon the introduction of the water-carriage system in all new and altered premises. It would not only be the most important sanitary measure that could be adopted in the Borough, but would also, in my opinion, ultimately be a great saving to the ratepayers. In 1893 the Local Government Board intimated that there were far too many privies in the Borough. . . .

"I would draw the Committee's attention to the scavenging, and suggest that the privies, &c. be emptied only during certain specified hours. It would keep the town in much better order if the refuse carts could collect the waste-paper, &c. from the shops at a convenient time. . . . . .

"The Local Government Board wrote in 1893 on the receipt of my report asking the Sanitary Committee to endeavour to abolish the privies and cesspools. I think that a check should be placed on the erection of new privies, that the water-carriage system should be insisted on where new property is erected, and at the same time the present privies and cesspools should be gradually lessened in number."

The following extract appears in the report of the Sanitary Inspector of Tipton, which is attached to the Medical Officer of Health's report:—"The parish is not so free from accumulation of ashes as I should wish it to be, but we must remember that we have in our parish every form of sanitary convenience, from the large open ashpit to the small dustbin, also from the large privy-midden to the small 'pail.' You will, therefore, understand that it is impossible, with our systems of removal, to cope with such a diversity without complaints."

In Tunstall, the contractor is said to be doing his work well, and steady progress is being made in abolishing old privies in favour of water-closets.

The Medical Officer of Health of Uttoxeter expresses a hope that, with the improved water-supply, privies may be abolished in favour of water-carriage.

The Medical Officer of Health of Willenhall writes :— "By far the greatest nuisance in the town, however, is that which arises from the 1,117 cesspits and 521 open ashpits—insanitary arrangements which have been deplored ever since a Medical Officer of Health was appointed. In recent years waste-water closets have been put in in considerable numbers, and, when managed by prudent people, have been a great improvement on the cesspit system. Experience, however, shews how frequently they are blocked up by rags, flannel, bricks, coal, hats, oyster shells, dolls, and hammers. The onus of keeping them in order, when once put in, is thrust upon the tenant. Obstructions are easily removable when first they occur, but if neglected, the tippers get disarranged, and a dangerous nuisance ensues. There is no reasonable probability of wash-down water-closets being put in on a large scale in Willenhall, because breakages from frost are frequent, and the Corporation charge of 10/- a house, or £1,730 a year, if the system were universal, is prohibitive. It, therefore, follows that if the water-carriage system is to be encouraged, it can only be by an increased use of waste-water closets of Duckett's and Day's types. Whilst desiring to encourage the abolition of the cesspit system in favour of water-closets, I think tenants are being duped by those who profess to remove obstructions, and therefore advise the Council to issue handbills where waste-water closets are in use, calling attention to the fact that it has been decided that tenants are responsible for keeping them in order, and, if the Council should approve my suggestion, announcing that a servant of the Council, who should be a competent man, will remove obstructions at a fixed prepaid charge, provided notice be given to the Sanitary Inspector at once. Unless the Council are willing to make some such rule, I shall hesitate to advise any more waste-water closets."

The Medical Officer of Health of the Cannock Rural District urges his Council to undertake the scavenging in the more populous places.

In the Mayfield Rural District the cesspits and ashpits are said to be very bad in some parts of the district.

In the Walsall Rural District there is said to be a great improvement in the scavenging at Pelsall and Rushall.

In the report of the Medical Officer of Health of Tutbury Rural District there are many references to insanitary privies.

Sewerage and Sewage Disposal.

Apart from the information already in the Council's possession as to the general activity on the part of most Authorities in improving the various sewerage systems, it is evident from the prominence given to the subject in most of the reports that honest efforts are being made to meet the views of the Council. The following summary of the remarks under this heading will serve to show that this is the case:—

The Medical Officer of Health of Audley writes:—"The County Medical Officer paid two visits to the district in July, and inspected the sewage outfalls, subsequently reporting to the Council upon the unsatisfactory state of several of the outfalls in the Audley District. In October, at the request of the Council, Dr. Reid again came over and considered with us a scheme for dealing with the Audley and Wereton sewage. A Committee of the Council has been appointed to make the necessary arrangements for developing this scheme. When completed, these works will deal in an efficient manner with one half of the river pollution in the district."

The Medical Officer of Health of Biddulph points out that only a portion of the sewage is dealt with, and calls attention to the action of the County Council in this direction. He states that the existing arrangements are admittedly unsatisfactory, and that although the question has been considered, "no action has yet been decided on."

The Medical Officer of Health of Brierley Hill writes:—"A good deal of attention has been given to this question during the year. Mr. Willcox, the Sanitary Engineer engaged

by your Council, has been over on several occasions, attending meetings and making further investigations.

"In October, a deputation visited several towns in Lancashire, and inquired into the method of sewage disposal at Failsworth, Riddish, and Cheadle. They were accompanied by Mr. Willcox, and a report was drawn up, which was afterwards submitted to your Council and discussed. As these inquiries and investigations proceed, it becomes more and more evident that there are difficulties in the way of successfully disposing of the sewage in the district which are not to be found in the places which we have visited, and chief amongst these is the question of obtaining suitable land.

"I confess to a feeling of considerable anxiety as to the wisdom of putting down an expensive plant in such a district as this, hemmed in as we are on every side by thickly-populated places, where the land in our own district is unsuitable, and the collected sewage must be treated by expensive chemical means, none of which can be said to be entirely satisfactory.

"An important step has recently been taken in considering the advisability of joining with the Rural Sanitary District of Kingswinford in a combined scheme, and a conference, attended by Mr Willcox, has already been held between representatives of the two authorities.

"I have no doubt this is the proper solution of the difficulty, and would be to the advantage of both sanitary areas. It would be a huge mistake for the two districts, having such natural facilities for a common outfall, to ignore this advantage, and have separate systems. There is abundance of suitable land outside the Rural Sanitary District where the difficulty of dealing with the effluent could be met in the best possible way.

"The question of a combined sanitary area which has now been raised, will necessarily involve considerable delay, but if you can arrive at a satisfactory arrangement, and carry your combined outfall works outside both districts, the delay will be amply justified."

The Medical Officer of Health of Cannock Urban District writes:—"It is to be hoped that the Urban District Council's negotiations with the Local Government Board with regard to the new sewerage scheme, embracing especially Heath Hayes, the sewage to be brought on to the sewage farm, will prove successful. Green Heath, in the Hednesford Ward, also requires a more complete system of the sewerage, as does Chadsmoor, and Stonefields, in the Cannock Ward. . . .

"The sewage farm has also been visited by me on several occasions, and I have taken monthly samples of the effluents and subjected them to quantitative analyses. With regard to the working of the sewage farm, it will be best effected by the Urban District Council having the direct control and management of the farm, and I am pleased to say this has recently been arranged. I believe that the farm, properly managed, will deal satisfactorily for some time to come with the screened sewage of the district, but I would recommend the eventual use of precipitation tanks, the effluents from which to be distributed over the farm lands before finally passing into outside streams, and then there will be no fear of incurring penalties under the Rivers Pollution Acts."

The Medical Officer of Health of Perry Barr writes:—"With regard to the drainage of the colliery cottages at Hamstead, you have made enquiries with a view to carrying out a scheme for the disposal of the slop-water, but hitherto without effect. If provision be made for keeping the rain-water out of the dumb-wells, and cleaning them periodically, no nuisance need arise in the future. In this opinion the surveyor agrees with me."

As regards Quarry Bank, the Local Government Board have sanctioned a loan for a general sewerage scheme.

In Rowley Regis Urban District the Tividale sewerage scheme has been completed, and it now only remains to connect the houses. In the other parts of this district the internal drainage has been commenced, and concerning this work the Medical Officer of Health writes as follows:—"I am pleased to say that the Council has arrived at a very wise

decision in determining that all house connections shall be made under the superintendence of an assistant surveyor, especially appointed for that purpose, and it is hoped by that means to secure the best method of connection, the greatest efficiency in working, and the least danger to public health. I hope at the close of next year to be able to report that a vast number of connections have been made with the sewers."

The following paragraph also appears under the heading of Rivers Pollution :—" Difficulties in connection with the pollution of rivers by galvanizers' waste acid has arisen in Tividale and Cradley Heath, but in both instances it appears that pollutions of this nature are reaching the same streams from other districts than Rowley Regis, and it is desirable that joint action of other local authorities with this Council should, if possible, be brought about. The Council have given particulars of this matter to the Staffordshire County Council, and I trust that joint action will be the speedy and effective result."

The Medical Officer of Health of Rugeley writes :—" The question of sewage disposal, which I mentioned in my last annual report, is still under your consideration. Several systems of disposal, plans and estimates, furnished by skilled engineers, have been before you for consideration, but no conclusion has yet been arrived at. One of these systems of disposal, which on account of its economy in working, naturally attracts your notice, is that known as the Septic system of sewage disposal, and is a system which, as I understand it, claims to be capable of removing all organic matter from sewage by means of bacterial agency, and to turn out an effluent which shall satisfy the requirements of the Rivers Pollution Act, without further treatment by land or otherwise. If it is capable of doing this, it would suit the case of Rugeley exactly, as our difficulty is to find suitable land for sewage treatment without the expense of pumping. I think that, theoretically, the system has a ring of possibility about it, but as yet it is in an experimental stage, having been applied to small areas only; its capability therefore of dealing with the sewage of a town,

even the size of Rugeley, is not yet proven. Also, I have not been able to ascertain, that it has ever been explained what becomes of the organic matter supposed to be removed from the sewage, or that immunity can be secured from the offensive gases which must escape into the air from tanks charged with such a mass of putredinous matter, which with a S.E. wind would be carried over the town. The impending Local Government Board enquiry at Exeter might help to clear away some of this ambiguity, and, I think, you will act wisely by sending a representative to attend that enquiry, as, no doubt, much useful information may thereby be obtained."

The Short Heath District Council are advised to take up the question of sewage disposal, in order to avoid the risk of penalties.

The Medical Officer of Health of Stone Urban District writes:—"The partial completion of the new sewerage works by precipitation and polarite filtration, so far as to be, to some extent, in working order has been accomplished during the year, but has yet to be supplemented by land treatment.

"Many connections also still remain to be made, and great care will be needed that the work is efficiently performed. The gradient at the lower part of the town, below the Crown Hotel, is very slight, with consequent deposit in the sewers, and at times offensive effluvia from the manholes and gratings. Some flushing apparatus will, I fear, be needed in the hot and dry weather. The ventilating shafts ordered by your Authority, and recently fixed, will only be a partial remedy."

In Smethwick, it appears that considerable attention has been paid to the question of the disposal of galvanizers' waste pickle, and that good has resulted. Progress has also been made with house-drainage during the year.

The Medical Officer of Health of Tamworth calls attention to the polluted state of the River Tame, and details the action his Council have taken in the matter, with which the County Council are already familiar.

In Tettenhall, 170 houses have been connected with the new sewers during the year, bringing the total of such connections up to 1,026.

In Tunstall, it is said there is every prospect of the new sewage disposal works being commenced soon.

The Medical Officer of Health of Uttoxeter Urban District writes as follows:—"The Council has devoted much time and attention to this very important subject, and, as you are aware, several of the members (accompanied by the Sanitary Inspector and myself), visited four towns, to gain information of the various methods adopted for the disposal of sewage, and after obtaining other information the Council decided to call in a competent Sanitary Engineer, who has been requested to supply plans and estimates for an efficient scheme."

As regards Wednesfield, it is said that the District Council have now taken the matter of sewage disposal in hand seriously.

The Medical Officer of Health of Lichfield Rural District writes:*—"The proposed system of dealing with the sewage of Chasetown to which I referred in my last annual report, has not yet been carried out. Very considerable delay arose in preparing the plans in the first instance, and ultimately, after a further delay of two months, the Local Government Board refused to sanction the adoption of the Septic process which was recommended by the expert engaged. The ground intended for a 'tip' for ashes forms part of the area proposed for the sewage scheme, and, pending the purchase of such ground, it does not appear that any place can be found available for the purpose. I am informed that other plans are being prepared, and negotiations are in progress for the purchase of the land, and there is every probability that the work will soon be carried out at Chasetown. But it is a matter involving a large expenditure, and there are many things to be considered.

"The drainage at Chase Terrace is not so urgent, but I understand that as soon as the sewage system is in operation at Chasetown, the former will receive the undivided attention of the local committee, and also the difficulty which is still experienced in disposing of ashes and house refuse."

* Since the date of this report a Local Government Board Inquiry has been held to consider an amended scheme of sewage disposal for Chasetown.

In the Leek Rural District, the question of sewage disposal at Endon still remains unsettled. Throughout this district considerable attention seems to be paid to local small pollutions.

In the Stoke-on-Trent Rural District, the Medical Officer of Health hopes that the amended scheme of sewage disposal for Bucknall will soon be commenced.

In the report of the Medical Officer of Health of Tutbury, reference is made to pollution at Barton-under-Needwood, Branstone, and Tatenhill, and the District Council are urged to take steps to remedy these pollutions. As regards Tutbury proper, the report states:—"This parish is not in a good sanitary condition. There are many defective and worn-out drains. These connot very well be put right until the new scheme of sewerage has been carried out, as anything done now would mean double expense to property owners.

"When this scheme is accomplished, and when the Parish Council undertakes the removal of all house refuse, the parish will be in a more favourable sanitary condition than at present."

In the Walsall Rural District, two sewerage schemes, one for Pelsall and Rushall, and the other for Aldridge, have been placed before the Local Government Board for approval.

Water-Supply.

The following is a summary of the remarks with reference to water-supply in those districts where the subject receives most notice in the reports. The Sanitary Committee of the County Council have frequently had occasion to spur on Authorities in districts where good public supplies are available, but where many old local wells, liable to pollution, were still in use.

In Brierley Hill, 91 houses have been connected with the water-mains during the year.

The Medical Officer of Health of Brownhills writes as follows:—"I would suggest that the Council should press on the Water Company their duty to the public. At present they seem to read their duty to themselves and dividends. I have

had several complaints made that they, the Company, will not lay their pipes a few yards off the main road. Take for instance opposite the Wheel Inn, Walsall Wood. Several houses would by this time have been erected, and others would have taken the water in, but I am informed that the Company refused to go the few yards necessary. I would suggest to them that they take sufficient liberties with our roads and leave them, to my personal knowledge and risk, in such a state as to justify the people in asking some return of advantage to the ratepayer as well as the shareholder. There yet remain many houses where it would be desirable that the public water should be laid on, and I hope that the Council will deal strictly with the case I called to their attention. I do not think it fair that numbers of people should have to go 200—300 yards for every drop of water they have. I would urge that houses where this prevails should be closed."

In Cannock Urban District, the water-supplies of 49 houses have been condemned by the Medical Officer of Health, and the public supply has been substituted in all these cases.

The Medical Officer of Health of Coseley writes as follows:—"During the year, 100 houses have been connected with the public supply, but there are still many which have no proper water-supply, the majority of wells in a district like this being totally unfit for cooking purposes. I would beg to urge upon your Council that this is a question of the greatest importance, and where the main is near, 'tap-' water should be insisted on. The efforts which your Council have made during the year to secure a supply of wholesome water for Cinder Hill have unfortunately not yet been attended with success, and the possibility of a repetition of the experiences of last summer, when water, even for slop purposes, was not available, is to be feared, unless some solution of the difficulties is arrived at. I feel sure, however, that the commendable perseverance with which your Council are endeavouring to deal with this most complicated matter, must soon be attended by the success which it deserves."

In Handsworth, it appears, there are still a number of local wells, and of twelve samples analysed, three were condemned.

In Newcastle Urban District, 25 houses have been connected with the mains during the year, leaving 45 houses which are still dependent upon local well supplies.

The Medical Officer of Health of Perry Barr writes as follows:—"During the year the Birmingham Corporation has laid a 4-inch water-main, which enters the district by the Old Walsall Road, runs to the west along the Walsall Road, and thence down the Newton Road. With its branches, the main measures 2 miles 780 yards. Five villas and nine cottages have been connected with this water-supply.

"During the year I made an inspection of every local source of water-supply, and found that 199 houses had well-water supplied from 92 wells, of which 11 were draw-wells (of these houses 14 subsequently had Birmingham water laid on); the 155 Colliery Cottages were supplied from a spring in No. 2 shaft, which yields 8,000 gallons daily. This water, when analysed, was found to contain 50 grs. of common salt per gallon. The Birmingham water was supplied to 44 houses, and finally that 12 houses, including one licensed beer-house (or public-house), had no proper water-supply.

"The great majority of the pump-wells were inefficiently protected against surface pollution, and several were in dangerous proximity to offensive privies. By conversion of the draw-wells into pump-wells, protected against surface-pollution in the manner mentioned in my last annual report, a fairly good water may be obtained, but those who wish for a trustworthy supply must either have the Birmingham water or spend a considerable sum of money on the old wells."

The Medical Officer of Health of Quarry Bank writes as follows:—"During the year, 97 houses have been connected to the South Staffordshire water-mains. Samples of water from 19 wells have been analysed, one by the County Analyst, and the remainder by myself. With one exception

they were found to be polluted. In the exceptional case the water-supply was totally insufficient, the well being often dry. About 50 wells have been closed, making a total of about 100 since the epidemic of typhoid fever began in 1895. The outlying districts of Saltwells Coppice, Dunn's Bank, and Mears Coppice continue, despite the persistent efforts of the Council, to derive their water-supply from surface-wells polluted or liable to pollution. The difficulty in the case of the Saltwells Coppice lies in the form of agreement between the South Staffordshire Waterworks Company and the Lord of the Manor. In the case of Dunn's Bank and Mears Coppice the Waterworks Company refuse to carry their pipes at ordinary rates, owing to the distance from existing mains.

"A number of surface-wells are still in use in the central part of the district, especially at Cradley Forge and Hammer Bank, and none of them from their surroundings can be considered safe for drinking purposes. Under your instructions I am, with the assistance of the Sanitary Inspector, making a rough survey of the wells of the district, which, when completed, will be presented to you. So far, however, I may say that no well has been found which is not liable to surface-pollution, whilst some are particularly so."

The Medical Officer of Health of Rowley Regis writes as follows:—"Twenty-seven samples of water have been analysed, and twenty-three have been condemned as unfit for use.

"Three hundred and thirty-three have been supplied with the South Staffordshire Company's water.

"Turner's Hill and district are still without an adequate supply of water; all efforts to induce the South Staffordshire Waterworks Company to extend their mains in this direction have failed, and the solution of the problem, how to overcome this difficulty, seems as far off as ever. It would be a great advantage if the water-supply were given at a greater pressure than is often the case in the summer time, and a particular advantage if it were a constant supply."

"The Medical Officer of Health of Sedgley writes as follows:—"During the year the public water-supply has been much extended, for your surveyor informs me that 136 houses have been supplied with tap-water, making a total of 1,630 out of about 3,000 houses in your district. Much, however, still remains to be done in this matter, and I beg to repeat what I have said in my two last reports, viz.: I would strongly recommend that your surveyor should take steps forthwith to have tap-water laid on to those houses which at present *have no supply whatever*, although tap-water is available, and that if necessary he have assistance to make a house-to-house visitation, beginning with the streets most recently supplied by the South Staffordshire Waterworks Company.

"Bearing on this question, it is only fair to state that in August you adopted my recommendation that your Clerk should again call the Company's attention to their unfair mode of cutting off the supply without notice at each week-end, and to their unnecessary delays in making connections in this district. Lately there has been the same cause of complaint on this account."

As regards Short Heath, the supply seems to have been much more abundant than hitherto, especially since the new mains from Wolverhampton to Willenhall have been laid.

The Medical Officer of Health of Stone Urban District writes as follows:—"Over 650 houses out of 1200 are now connected with this supply, but very few have been added during the last two years. Many local wells are still being used that are not altogether satisfactory.

"I would suggest that an examination be made, street by street, of the whole district, with a view of compelling the use of the town water where impurities are detected."

In Stoke-on-Trent Urban District, some 30 houses are still supplied from local wells, and in connection with one of these wells, which is still in use, although condemned in 1895, it appears that two cases of enteric fever occurred.

The Medical Officer of Health of Tettenhall writes as follows:—"The water mains have been extended 484 yards within the district.

"Seventy houses have had tap-water laid on during the year, while in 1895 only 44 houses were connected to the public supply. Mr. Mortimer attributes the fact of so many houses being connected to the long-continued drought, which dried up many wells.

"Soft-water cisterns again attract unfavourable comment from the inspectors. In my reports for 1892 and 1893 it was noticed that they are generally underground, and oftener under house floors, the favourite site being the neighbourhood of the sink. Water from the sink penetrates through the bricks, and not only fouls the soft-water, but the cistern being unventilated, the foul air it contains escapes into the house, especially at night-time. It is also remarked that the overflow is connected with the drains, so that these cisterns may become reservoirs of sewer-gas, or even receive back-poundage from the sewers themselves.

"These cisterns are also a source of damp, yet there are no bye-laws to control their structure, situation, or ventilation.

"The hardness of tap-water, and motives of economy in the quantity of soap used, and the amount of the water-rate, furnish arguments in favour of soft-water cisterns."

As regards Tipton, the public supply has been laid on to 132 houses during the year, and the Medical Officer of Health states that this supply will soon be used universally, judging from the rate at which it is being extended.

In Smethwick, the public supply has been laid on to 258 new and 203 old houses during the year.

The Medical Officer of Health of the Cannock Rural District writes as follows:—"The question of water for Cheslyn Hay and Great Wyrley is receiving attention, an expert having been called in to give his opinion on a local scheme. It is a most pressing problem, great privation having this year been experienced through the scarcity of water. Water can be got

near at hand, but with the South Stafford mains so near, it seems a pity not to be in a position to utilise such, as this would *ensure* a pure and continuous supply."

It appears from the report of the Medical Officer of Health of Cheadle Rural District that the water-supply of the town of Cheadle is still unsatisfactory, the water being turned off every night and the whole day on Thursday. The Medical Officer of Health states that this is quite unnecessary, as the supply is ample, and points out the dangers of such a practice from a drainage point of view, apart from other considerations.

It would appear from the following extract from the report of the Medical Officer of Health of the Eccleshall Division of the Stone Rural District that the District Council have not given that attention to the question of the water-supply of the district which it demands. The Medical Officer of Health writes as follows:—"The water from the Staffordshire Pottery Corporation Works at Hatton has been laid on to several cottages at Bowers, and also at the Row, where the water-supply had been very defective. At Cotes Heath the water-supply is still very defective. The two cottages where the case of diphtheria occurred have no water. Rather extensive work has been done to supply the two farms; pumping is done by a wind-mill, and a reservoir has been built, but I am doubtful whether this supply will be permanent, and this is not intended to supply the above-named cottages. There is now no water-supply to the schools at Croxton. Nothing has yet been done to improve the supply at the Upper Heamies Cottages. At Yarnfield, in two or three cases, the supply has been improved, but there are several cases where the water is unfit for drinking purposes. The public well at Offley Hay, mentioned in my last annual report, is still unprotected. The public well at Croxton has been properly protected, but the well at Garmelow remains in the same unsatisfactory condition. The water-supply to several cottages at Blackwaters, Croxton, where the case of diphtheria occurred (Dec., 1895), might be made good if the spring were properly protected. At Offley Hay the supply to the cottages occupied by Lightfoot, Hughes, and another, is

still defective; both of these cases have been reported to you on two occasions during the year. The water-supply to the cottages at Standon, where diphtheria occurred, is still unsatisfactory, but I am afraid it will be a difficult matter to obtain a good supply here. Water-supply has received much attention during the year, and many improvements have been effected."

The Medical Officer of Health of the Gnosall Rural District writes as follows, concerning a public well at Bishops Offley:—"A public well, to which it is acknowledged that the public have right of access, is much used and needs better protection; it is a spring issuing from the red sandstone, falling into a hole in the ground, and liable to cattle and other animal contamination. As this is undoubtedly a public well, in the sense of the public having right of access to it, the Sanitary Authority are, I believe, the body primarily responsible for its due protection."

In the Mayfield Rural District there is said to be a good supply available for the village of Waterhouses, if it were protected from surface-pollution, and this, it appears, could be done at a small cost.

In the Newcastle Rural District, Madeley and Leycett are now nearly entirely supplied from the mains, but complaints are still received from Betley, where, it is said, steps are being taken by the owners of property to repair existing wells and sink new ones.

The Medical Officer of Health of the Seisdon Rural District writes as follows:—"The Bilston District Council have for some months completed their work for the supply of water for Bilston, and, I am glad to say, have now laid down pipes from their works at the Bratch as far as Trysull village and the workhouse, although, as yet, the connections have not been made to the houses. The work also for the long-needed supply of water to the village of Wombourn will be commenced at once.

"Complaints have, in many instances, been made as to the deficiency of the supply of water in the district. Many wells have become dry. In several cases the owners, having their

attention called to this fact, have remedied the evil by lowering the wells.

"The cause of this deficiency may be attributed, around a certain area, to the pumping engine at the Bratch, but also in some measure to the many long dry months of the year. Let us hope that the extra amount of rain during the last three or four months may, in some degree, remedy this important deficiency.

"During the year the Wolverhampton waterworks have supplied water to five houses in the parish of Penn, one at Bradmore, and six at Oaken.

"A well, which was supposed to supply first-class water, became polluted by a defective drain in Broad Lane, Pattingham. Here 198 feet of pipes were taken up and relaid."

In the Stone Rural District the water-mains have been extended, and many houses have been connected during the year. Oulton and Rough Close, however, are still badly supplied.

The Medical Officer of Health of the Tutbury Rural District states that there is no improvement in the supply at Hanbury, and recommends the Council to bore for water.

In the Walsall Rural District, 54 houses have been connected with the mains during the year.

In the Leek Rural District, it is said that the water-supply at Norton has been greatly improved during the past fifteen years by the extension of the mains. Longnor and Grindon are now supplied by service pipes from a reservoir. In the Leek and Leekfrith districts the water-supply is said to be generally good, and the whole of the village of Stanley has been supplied from the mains during the year. Concerning the supply at Biddulph Moor, the Medical Officer of Health writes as follows:—"On June 21st, accompanied by the Sanitary Inspector, I examined a largely-used public water-supply called 'Wright's Well,' at Biddulph Moor, the well is situated in a field 200 yards from the highway, there having been several cases of diphtheria in the neighbourhood. I found

the well liable to be polluted by surface-water and animal excrement. I recommended that the well should be protected, and that the water should be taken in pipes to the high road, where a standpipe or a trough could be fixed."

Slaughter-Houses and Meat Inspection.

Most of the reports refer to the inspection of slaughter-houses, and, as a rule, they are said to be found in a fairly satisfactory state.

The Medical Officer of Health of Rugeley writes as follows:—"With regard to the slaughter-houses, on the whole, there is some improvement as compared with the former year, but there are some butchers who, in disregard of the bye-laws, still fail to keep their slaughter-houses and premises as clean as they ought to do, and I therefore repeat the suggestion I made last year, that the Public Health Acts Amendment Act, which gives the Sanitary Authority power to suspend the licences, be adopted, or that abattoirs for slaughtering purposes be provided outside the town. This latter alternative would effectually remedy a possible danger to public health, render the inspection of meat an easy matter, and should be acceptable alike to the public and the butcher."

It would appear from the report of the Medical Officer of Health of Short Heath that the District Council of that town have not enforced the registration of slaughter-houses.

The Medical Officer of Health of Stone Urban District recommends that a public abattoir should be erected on suitable land at the back of the Town Hall when that building becomes the property of the District Council.

The Medical Officer of Health of Stoke-on-Trent Urban District states that there is need of a public abattoir for that town.

Bakehouses.

Most of the reports mention the fact that the bakehouses are regularly inspected, but few contain any observations under this heading which call for special notice.

The Medical Officer of Health of Rugeley writes as follows:—"With regard to the bakehouses, I have noted during my visits that most of them were in a bad condition as regards their floors, which, besides being structurally out of repair and very uneven, were also covered with a thick layer of unwholesome dust, a condition which cannot be considered healthy in a building used for the preparation of the most commonly-used food of man."

Dairies, Cowsheds, and Milkshops.

The work under the Dairies, Cowsheds, and Milkshops Order receives attention in most of the reports. The Medical Officer of Health of Bilston writes, under this heading, as follows:—"These are regularly visited and the milkshops as a rule have been found clean and well ventilated. The cowsheds, however, are in most cases capable of much improvement. They are mostly overcrowded, the ceiling or roof is low, the windows covered, and ventilating spaces blocked up, the idea being to keep the cows warm, and the result is that they breathe the same air over and over again. There should be proper bye-laws to regulate these matters, and also the supply of water, which in one case was derived from a questionable source."

Lodging-houses.

Only in a very few of the reports is any mention made of the inspection of common lodging-houses.

It is satisfactory to find that in Stafford the inspection of lodging-houses is now entrusted to the Sanitary Inspector. The Medical Officer of Health hopes that by this arrangement the work will be more satisfactorily done from a health point of view, and he points out that the necessary supervision is secured to the Police by giving a Police Officer the honorary appointment of Assistant Inspector.

It is to be hoped that the example of Stafford may be followed by other districts where the inspection of lodging-houses is still in the hands of the Police.

Canal Boats.

In a few instances only does the question of canal-boat inspection receive notice in the reports under review, and in none of these are there any remarks which call for special mention.

Factories and Workshops.

The provisions of the Factory and Workshops Act, 1891, seem to be receiving more attention in the various districts than hitherto.

In Bilston, the factories and workshops are referred to as being in a satisfactory state.

In Brierley Hill, nine special inspections were made during the year, and several sanitary defects were remedied in consequence.

In Handsworth, "the 84 workrooms and workshops in the district were visited on 134 occasions. In 7 cases notices to cleanse and limewash were served, and in 8 cases notices to abate nuisances were given. In two cases workrooms were found to be very much overcrowded, and steps were taken to abate the nuisance."

In Rowley Regis, the chief cause of complaint was found to be deficient closet accommodation, but in every case the defects were remedied.

The Medical Officer of Health of Short Heath writes as follows:—"I inspected 47 workshops, with the result that 21 requests to limewash them were made, and three nuisances were discovered. Your inspector reports that these 21 requests to limewash, together with two carried forward from the preceding year, have been complied with, and that each of the nuisances has been abated without the necessity of any formal order from the Council. I am therefore able to report that the inspections made in 1895 and 1896 have resulted in every workshop being limewashed within fourteen months from the date on which it was previously done. There were twelve cases in which it was thought desirable to ascertain whether there was

any overcrowding of workmen, and your Clerk having given me the cubic contents, I am glad to say that in all cases the air-space was well above statutory requirements."

The Medical Officer of Health of the Stone Urban District writes as follows:—"The Factory and Workshops Act, 1891, has engaged considerable attention. Lists have been furnished to me by the factory inspector of the district, consisting of 174 small workshops where boots and shoes are, to some extent, manufactured at home. Thirty-six of them were duplicates, the occupants being employed at more than one factory; 28 of the number required limewashing, 12 of them additional ventilation, and 7 were overcrowded, not having the requisite cubic feet of space required by the Act."

The Medical Officer of Health of Willenhall writes as follows:—"By the terms of the Factory and Workshop Act, 1895, any workshop is overcrowded which, during ordinary work-time, does not contain at least 250 cubic feet of air for each person at work therein. It is the duty of the occupier to get the measurement at his own cost, and to affix a notice indicating the cubic feet of space in each shop or room, and the number of persons who may be employed therein. About 210 workshops, out of a total of about 340, were inspected, and I induced the Council to permit the inspector on this occasion to indicate, free of cost, on the proper Form (46), the number which may be employed in each room. The measurement of every shop was given by your inspector, and I am pleased to say no case of overcrowding was discovered. No wearing apparel may now legally be made, cleaned, or repaired in any dwelling house or building occupied therewith, whilst any inmate is suffering from scarlet fever or small-pox. In several instances where such an event might happen, ths special attention of the occupier was directed to the section of the Act by me. Every medical practitioner is bound to notify the Chief Inspector of Factories of cases of lead, phosphorus, or arsenical poisoning, or of anthrax. One case of lead colic was notified by me. Forty-six notices to limewash workshops were

given, 33 of which were complied with, and in 13 instances an extension of time was allowed. Twelve nuisances in or near workshops were discovered; seven of these have been abated, and four relating to the provisions of separate sanitary conveniences for the different sexes, or to the absence of any sanitary convenience, were referred to the Surveyor for consideration."

Mortuaries.

The question of providing mortuaries does not appear to receive that attention in the reports which its importance deserves. It is satisfactory to note, however, that in Coseley and Bilston mortuaries have this year been provided, and that in Rowley Regis one is now in course of erection, and another will probably be built for the Tividale neighbourhood.

The Medical Officers of Health of Stoke-on-Trent and Willenhall Urban Districts both point out the desirability of providing public mortuaries.

Smoke Nuisances.

Notwithstanding the field there is in this County for action under the smoke nuisance clause of the Public Health Act, the question receives very little mention in any of the reports under review.

Under this heading the Medical Officer of Health of Willenhall writes as follows:—"Some years ago I endeavoured to persuade manufacturers that the use of gas engines instead of steam power would be advantageous and economical in the Willenhall trades, and that the use of them would, to a large extent, solve the smoke nuisance difficulty. There can be no doubt that hitherto the conclusions arrived at were correct; but now that manufacturers have satisfied themselves of the superiority of gas power to steam power, some of them have taken, on the grounds of economy, to make a crude form of coal-gas themselves, whilst others are contemplating the same. There can be no doubt a number of gasometers dotted over the town will prove a nuisance likely to drive some of the

more prosperous portion of the population away. It therefore becomes a question whether the Council ought not to take powers, by a new Bye-law, either to prevent the erection of gasometers altogether, or to prevent their erection without the sanction of the Council."

Bye-Laws.

In Coseley and Handsworth, it appears that new Bye-laws are now being framed.

In Perry Barr, Bye-laws have been framed, and have received the sanction of the Local Government Board.

The Medical Officer of Health of the Stoke-on-Trent Urban District urges his Authority to adopt new Bye-laws.

In the Seisdon Rural District, Bye-laws have been framed, and will shortly be submitted to the Local Government Board for approval.

Adoptive Acts.

The Summary Tables at the end of this Report show the position of the various authorities as regards Adoptive Acts.

The Medical Officer of Health of the Stoke-on-Trent Urban District urges his Authority to adopt the Infectious Diseases Prevention Act, and the Public Health Acts (Amendment) Act, 1890.

During the year the Quarry Bank Urban District Council have adopted the Infectious Diseases Prevention Act, 1890, and Parts II, III, and V of the Public Health Acts (Amendment) Act, 1890.

The Rugeley Urban District Council have also adopted the Public Health Acts (Amendment) Act, 1890.

Printing of Reports.

I am pleased to say that, with two exceptions, Cheadle and Mayfield Rural Districts, all the Annual Reports of the Medical Officers of Health in the County are now printed. This is a great advance since County Councils were instituted,

when only 24 of the 57 Authorities then in existence printed the reports of their Medical Officers of Health. It is to be hoped that I shall be in a position to state next year that the two Authorities now constituting the exception to the rule have fallen into line with the others.

GEORGE REID,
County Medical Officer.

Stafford, September, 1897.

NOTE.—In the following tables the individual zymotic mortality is given in order to indicate readily the class of disease that has mostly contributed to the gross rate. Apart from this, no accurate deductions can be drawn from such figures for one year only.

URBAN.

Table showing Population, Number of Persons per Acre, Birth and Death-rates, as well as the Death-rates at all ages and among Children under 1 year, and the Death-rates from Zymotic Diseases, Phthisis, and Diseases of the Respiratory Organs.

DISTRICT.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.										Phthisis.	Diseases of Respiratory Organs.
														Fevers.					
	Census, 1891.	Estimated to middle of 1896.						Smallpox.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.	Diarrhœa and Dysentery.		
AUDLEY	12631	13000	1·6	38·6	*a* 15·7	111	0·69	..	0·30	0·23	..	0·15	..	..	..	..	..	1·15	4·30
BIDDULPH	5290	5500	1·08	34·1	*b* 16·3	138	2·0	..	0·54	0·18	0·54	0·54	0·36	..	..	..	0·36	1·63	2·72
BILSTON	23453	23500	12·5	36·8	19·5	181	3·14	..	0·42	0·17	0·29	0·29	0·72	..	0·29	..	1·23	0·89	4·63
BRIERLEY HILL	11847	11972	11·6	33·1	14·8	151	2·0	..	0·08	0·08	0·33	0·66	..	..	0·08	..	1·08	1·00	2·25
BROWNHILLS	13703	11488	1·8	47·6	16·8	115	2·0	..	0·26	..	..	0·87	0·60	..	0·08	..	0·17	0·69	3·83
BURSLEM	31999	34231	13·2	39·6	20·5	216	4·35	..	0·17	0·17	0·29	1·34	0·40	..	0·26	0·05	1·92	1·13	2·92
CANNOCK	20613	22000	2·7	35·4	17·1	164	2.36	..	0·22	..	0·04	1·13	0·59	..	0·04	..	0·36	1·22	4·04
COSELEY	21899	22000	5·5	38·0	17·9	164	2·22	..	1·18	0·09	0·04	0·13	0·31	..	0·04	..	0·45	0·81	3·40
DARLASTON	14422	15141	18·9	41·0	21·2	183	2·77	..	0·19	..	0·13	0·66	0·79	..	0·06	..	1·05	1·25	6·47
FENTON	16998	20500	12·8	41·2	21·2	196	3·75	..	0·43	0·48	..	1·60	0·53	..	0·14	..	0·53	0·63	3·75
HANDSWORTH	32756	40600	11·1	25·9	*c* 13·3	145	1·99	..	0·19	0·59	0·02	0·12	0·34	..	0·07	..	0·66	0·96	1·69
HEATH TOWN	7075	7600	10·2	41·3	*d* 19·3	171	3·68	..	0·26	0·52	..	..	0·39	..	1·05	..	1·44	0·13	4·07
KIDSGROVE	3841	4151	3·8	31·5	15·4	145	0·24	..	..	0·24	..	..	..	..	..	..	..	0·24	3·61

a Including 7 deaths which occurred outside the district among persons belonging thereto.
b Including 1 death ,, ,, ,, ,, a person belonging thereto.
c Including 27 deaths ,, ,, ,, ,, among persons belonging thereto, and
not including 3 ,, ,, ,, within ,, ,, ,, not belonging thereto.
d Including 13 ,, ,, ,, outside ,, ,, ,, belonging thereto.

Deaths registered during the year 1896, classified according to Diseases, Ages, and Localities, together with Births registered during the year.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
																	Fevers.																	
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
AUDLEY	247	256	503	99	106	*a* 205	56	44	8	5	49	43	..	4	3	..	..	..	..	..	1	..	..	2	..	..	1	..	15	56	13	11	99
BIDDULPH	95	93	188	45	45	*b* 90	26	19	3	3	19	20	..	3	1	3	..	..	..	..	2	..	..	3	2	2	..	..	9	15	5	1	44
BILSTON	459	408	867	244	216	460	157	93	18	17	112	63	..	10	4	7	..	7	..	..	..	..	2	7	17	29	1	..	21	109	11	17	218
BRIERLEY HILL	213	184	397	106	72	178	60	37	7	4	40	30	..	1	1	4	..	1	..	..	1	..	..	8	..	13	1	..	12	27	7	3	99
BROWNHILLS	292	255	547	91	102	193	63	37	2	15	42	34	..	3	..	..	..	1	..	..	1	..	..	10	7	2	..	..	8	44	17	9	91
BURSLEM	694	662	1356	347	357	704	294	109	29	28	166	78	..	6	6	10	..	9	2	..	..	..	..	46	14	66	1	..	39	100	30	7	368
CANNOCK	392	388	780	200	178	378	128	72	15	11	86	66	..	5	..	1	..	1	..	..	..	..	1	25	13	8	2	..	27	89	28	12	166
COSELEY	414	424	838	219	175	394	138	68	26	16	81	65	..	26	2	1	..	1	..	..	1	..	1	3	7	10	4	..	18	75	25	3	217
DARLASTON	320	301	621	162	159	321	114	61	19	9	70	48	..	3	..	2	..	1	..	..	..	..	1	10	12	16	..	..	19	98	10	2	147
FENTON	452	393	845	217	218	435	166	110	24	12	79	44	..	9	10	..	..	3	..	..	..	..	..	33	11	11	2	..	13	77	19	10	237
HANDSWORTH	565	488	1053	274	269	*c* 543	153	67	28	23	146	126	..	8	24	1	..	3	..	..	1	..	..	5	14	27	6	..	39	69	42	21	283
HEATH TOWN	172	142	314	89	58	*d* 147	54	26	6	8	37	16	..	2	4	..	..	8	..	..	..	..	..	..	3	11	..	..	1	31	9	3	75
KIDSGROVE	72	59	131	34	30	64	19	6	2	2	22	13	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	15	6	5	36

a Including 7 deaths which occurred outside the district, among persons belonging thereto.
b ,, 1 death ,, ,, ,, ,, ,, a person belonging thereto.
c Including 27 deaths ,, ,, outside ,, ,, among persons belonging thereto, and
not ,, 3 ,, ,, within ,, ,, ,, ,, not belonging thereto.
d Including 13 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto.

URBAN—continued.

DISTRICT.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.											
														Fevers.					
	Census, 1891.	Estimated to middle of 1896.						Smallpox.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.	Diarrhœa and Dysentery.	Phthisis.	Diseases of Respiratory Organs.
LEEK	14128	14920	10·2	27·3	*e* 16·6	112	1·94	..	0·06	0·06	..	1·54	..	..	0.27	..	..	1·67	2·34
LICHFIELD	7864	7864	2·3	25·3	*f* 14·1	156	0·76	..	0·12	..	0·12	0.12	0·38	..	..	..	0·12	1·65	2·28
LONGTON	34327	36240	18·1	37·5	22·5	235	4·58	..	0·05	0·59	..	2·23	0·19	..	0·16	..	1·32	0·77	4·27
NEWCASTLE	18452	20000	30·6	33·2	*g* 16·8	200	3·75	..	..	0·15	0·10	1·20	0·10	..	0·05	..	1·25	1·20	4·95
PERRY BARR	2310	2600	0·6	35·0	11·1	154	1·15	..	..	..	..	..	..	..	..	..	1·15	0·38	2·30
QUARRY BANK	6732	7007	7·1	32·8	*h* 17·5	195	1·99	..	..	..	0·14	0·57	0·57	..	0.42	..	0·42	0·71	3·71
ROWLEY REGIS	30791	33800	9·2	36·0	*i* 18·8	182	3·31	..	0·41	0·05	0·17	1·47	0·79	..	0·17	..	0·38	0·38	3·78
RUGELEY	4181	4500	7·5	29·3	*j* 14·0	136	0·88	..	0·22	0·66	..	..	..	..	..	..	..	0·22	0·88
SEDGLEY	14961	15000	3·9	39·4	20·0	140	5·73	..	0·60	1·00	0·66	1·53	..	..	1·33	..	1·26	0·60	2·86
SHORT HEATH	2514	3373	3·1	40·3	13·6	102	1·48	..	0·59	0·29	..	..	..	..	0·29	..	0·29	*Nil*	4·44
SMALLTHORNE	5279	5750	10·8	38·4	18·0	171	4·69	..	0·34	..	..	2·78	0·52	..	0·52	..	0·52	1·04	4·00
SMETHWICK	36170	43000	22·8	35·9	16·8	168	2·46	..	0·18	0·09	..	0·97	0·27	..	0·20	..	0·72	0·90	4·25
STAFFORD	*18732	*19900	18·3	29·6	*k* 14·1	101	0·90	..	0·20	0·20	0·05	0·10	0·15	..	0·05	..	0·20	1·75	2·26

e Not including 9 deaths which occurred within the district among persons not belonging thereto.
f ,, ,, 24 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
g ,, ,, 10 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
h ,, ,, 13 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
i Including 14 ,, ,, ,, outside ,, ,, ,, belonging thereto.
j Not including 4 ,, ,, ,, within ,, ,, ,, not belonging thereto.
k Including 6 ,, ,, ,, outside ,, ,, ,, belonging thereto, and
not including 135 ,, ,, ,, within ,, ,, ,, not belonging thereto.

* Excluding Public Institutions.

URBAN—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																		
																	Fevers.															
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
LEEK	208	200	408	122	126	*e* 248	46	36	6	16	83	61	..	1	1	..	..	4	..	..	..	..	..	23	..	..	1	..	25	35	27	5	126
LICHFIELD	102	97	199	58	53	*f* 111	31	11	1	4	32	32	..	1	..	1	..	..	..	..	..	..	..	1	3	1	..	..	13	18	9	3	61
LONGTON	662	699	1361	397	422	819	320	158	41	31	192	77	..	2	22	..	..	6	..	..	3	..	2	81	7	48	1	..	28	155	36	19	409
NEWCASTLE	342	323	665	185	186	*g* 371	133	69	7	19	102	41	..	..	3	2	..	1	..	..	..	..	1	24	22	25	1	..	24	99	16	6	147
PERRY BARR	46	45	91	16	13	*h* 29	14	2	4	..	5	4	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	6	1	5	13
QUARRY BANK	114	116	230	60	63	123	45	22	7	4	32	13	..	..	..	1	..	3	..	..	2	..	..	4	4	3	1	..	5	26	4	4	66
ROWLEY REGIS	619	597	1216	323	313	*i* 636	222	135	21	21	130	107	..	14	2	6	..	6	..	..	..	..	2	50	27	13	..	..	13	128	24	27	324
RUGELEY	64	68	132	24	39	*j* 63	18	8	5	..	17	15	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	4	3	47
SEDGLEY	301	291	592	171	129	300	83	64	20	12	57	64	..	9	15	10	..	20	..	..	1	..	1	23	..	19	..	..	9	43	26	10	114
SHORT HEATH	72	64	136	24	22	46	14	9	2	1	14	6	..	2	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	15	1	2	23
SMALLTHORNE	96	125	221	53	51	104	38	33	..	2	26	5	..	2	..	..	..	3	..	..	..	..	..	16	3	3	1	..	6	23	6	..	41
SMETHWICK	738	808	1546	368	355	723	260	138	36	24	132	133	..	8	4	..	..	9	..	..	1	..	2	42	12	31	1	..	39	183	29	37	325
STAFFORD	329	262	591	163	118	*k* 281	60	31	13	16	96	65	..	4	4	1	..	1	..	..	..	..	1	2	3	4	..	..	35	45	25	10	146

e Not including 9 deaths which occurred within the district among persons not belonging thereto.
f ,, ,, 24 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
g ,, ,, 10 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
h ,, ,, 13 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
i Including 14 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto.
j Not including 4 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.
k Including 6 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto and
not including 135 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.

URBAN—continued.

DISTRICT.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.									Phthisis.	Diseases of Respiratory Organs.
													Fevers.					
	Census, 1891.	Estimated to middle of 1896.						Smallpox.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.	Diarrhœa and Dysentery.	
STOKE-ON-TRENT ..	24027	26960	15·6	28·7	*l* 15·8	169	2·85	..	0·14	0·07	0·03	1·44	0·14	..	0·26	..	0·77	1·29	2·89
STONE	5754	6045	6·0	28·7	*m* 16·2	97	1·65	..	0·49	0·49	..	0·49	..	..	..	..	0·16	2·15	3·14
TAMWORTH.....	6614	7121	25·0	26·5	*n* 15·4	137	0·56	..	..	..	..	..	..	..	..	..	0·56	1·96	3·08
TETTENHALL.....	5145	5434	4·4	27·2	10·6	114	1·28	..	..	0·73	..	..	0·36	..	..	..	0·18	0·92	0·92
TIPTON	29314	29616	11·0	39·3	21·3	183	2·75	..	0·26	0·13	0·26	0·33	0·93	..	0·47	..	0·60	0·90	4·36
TUNSTALL	15730	16510	19·8	44·3	21·0	194	1·99	..	..	..	..	0·06	1·15	..	..	..	0·78	1·39	3·69
UTTOXETER	4800	4800	4·8	27·0	16·8	130	0·83	..	..	0·20	..	..	0·62	..	..	..	..	0·83	2·5
WEDNESBURY	25347	25300	11·8	37·9	20·8	174	3·24	..	0·11	0·19	0·07	2·09	0·39	..	0·19	..	0·23	0·79	3·79
WEDNESFIELD	4949	4517	1·7	31·4	15·7	154	1·99	..	..	..	..	..	1·10	..	..	..	0·88	0·66	3·98
WILLENHALL.....	16852	18301	14·6	35·4	*o* 17·8	187	1·31	..	0·05	0·05	..	0·05	0·49	..	0·16	..	0·49	1·14	4·42
Totals and Averages	551500	590441	7·0	35·4	18·0	171	2·71	..	0·24	0·22	0·10	0·88	0·44	..	0·20		0·71	0·99	3·56
33 large towns in England, average population, 328,802 ..	..	10850471	35·1	31·2	19·2	167	2·90	0·00	0·22	0·38	*p*	0·72	0·57	..	0·19		0·80	*p*	*p*

l Including 2 deaths which occurred outside the district among persons belonging thereto, and not including 227 ,, ,, ,, within ,, ,, ,, not belonging thereto.
m Not including 8 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
n Including 11 ,, ,, ,, outside ,, ,, ,, belonging thereto, and not including 7 ,, ,, ,, within ,, ,, ,, not belonging thereto.
o Including 13 ,, ,, ,, outside ,, ,, ,, belonging thereto.
p Not given in the Registrar-General's Returns.

URBAN—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
																	Fevers.																
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
STOKE-on-TRENT	410	390	800	228	199	*l* 427	131	70	18	20	120	68	..	4	2	1	..	7	..	..	1	..	..	39	4	21	2	..	35	78	30	6	197
STONE	90	84	174	53	45	*m* 98	17	3	4	5	31	38	..	3	3	..	..	..	..	..	1	..	..	3	..	1	..	..	13	19	11	..	44
TAMWORTH	93	96	189	56	54	*n* 110	26	6	3	4	39	32	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	14	22	12	4	53
TETTENHALL	88	60	148	27	31	58	17	11	..	2	12	16	..	..	4	..	..	..	..	..	..	..	..	..	2	1	..	..	5	5	8	..	33
TIPTON	608	566	1174	323	314	637	215	123	25	26	119	129	..	8	4	8	..	14	..	..	2	..	1	10	28	18	1	..	27	130	21	16	349
TUNSTALL	375	357	732	182	165	347	142	38	14	16	105	32	..	..	..	..	..	.	..	..	..	..	1	1	19	13	..	..	23	61	24	8	197
UTTOXETER	68	62	130	42	39	81	17	7	2	2	21	32	..	..	1	..	..	..	..	..	..	..	1	..	3	..	1	..	4	12	11	1	47
WEDNESBURY ..	502	457	959	297	231	528	167	104	22	13	114	108	..	3	5	2	..	5	..	..	..	..	..	53	10	6	..	..	20	96	24	6	298
WEDNESFIELD ..	75	67	142	34	37	71	22	14	2	6	19	8	..	..	..	2	..	..	..	..	..	..	..	..	5	4	..	..	3	18	3	1	35
WILLENHALL ..	340	309	649	167	160	*o* 327	122	35	7	2	109	52	..	1	1	..	..	3	..	..	1	..	..	1	9	9	1	..	21	81	11	8	180
Totals	10729	10196	20925	5500	5150	10650	3588	1876	447	399	2556	1784	..	143	131	63	..	118	2	..	19	..	17	525	261	423	30	..	586	2107	585	285	5355

l Including 2 deaths which occurred outside the district among persons belonging thereto, and not including 227 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.
m Not including 8 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
n Including 11 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto, and not including 7 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.
o Including 13 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto.

RURAL.

DISTRICT.	Population at all ages.		Mean area per person in acres.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.										Phthisis.	Diseases of Respiratory Organs.
														Fevers.			Diarrhœa and Dysentery.		
	Census, 1891.	Estimated to middle of 1896.						Smallpox.	Scarlatina.	Diphtheria.	Croup (not Spasmodic).	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.			
BLORE HEATH	2227	2227	6·1	22·4	15·7	160	2·24	..	..	0·44	..	..	0·89	..	0·44	..	0·44	0·89	1·79
CANNOCK	15894	15684	3·2	32·7	a17·8	152	1·40	..	..	0·25	0·12	0·12	0·70	..	0·12	..	0·19	0·82	3·31
CHEADLE	22302	..	2·4	33·7	14·7	106	0·80	..	0·13	..	..	0·13	..	..	0·13	..	0·40	0·76	3·18
ECCLESHALL	5698	6049	5·3	24·4	14·3	108	0·66	..	..	0·49	..	0·16	..	..	..	..	..	0·16	1·98
GNOSALL	4366	4980	5·7	23·0	12·2	78	0·60	..	0·20	..	..	0·40	..	..	..	..	..	0·40	1·80
KINGSWINFORD	20724	..	0·2	30·3	b16·1	157	1·97	..	0·28	..	0·09	0·72	0·43	..	..	..	0·53	0·91	2·36
LEEK	13998	12898	5·2	33·1	17·2	144	1·70	..	0·15	0·23	..	1·00	..	..	0·15	..	0·15	0·85	3·48
LICHFIELD	*22699	*24699	2·4	31·8	c14·6	138	1.53	..	0·12	0·04	..	0·28	0·64	..	0·08	0·04	0·32	0·80	2·55
MAYFIELD	4160	4160	5·8	29·0	12·0	41	0·24	..	..	..	..	0·24	..	..	..	..	..	0·96	2·64
NEWCASTLE	6174	6904	2·8	27·2	d14·6	143	2·46	..	0·72	0·28	0·43	1·01	..	..	0·28	..	0·14	0·57	2·75

a Including 1 death which occurred outside the district, a person belonging thereto, and
not ,, 5 deaths ,, ,, within ,, ,, among persons not belonging thereto.
b Not ,, 37 deaths ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
c Including 21 ,, ,, ,, outside ,, ,, among persons belonging thereto.
d ,, 3 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,

* Not including Burntwood Asylum.

RURAL—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
																	Fevers.																
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
BLORE HEATH	28	22	50	19	16	35	8	5	1	2	7	12	..	..	1	..	..	1	..	..	..	..	..	..	2	1	..	..	2	4	4	..	20
CANNOCK	252	261	513	140	140	a280	78	28	14	12	77	71	..	..	4	2	..	2	..	..	..	..	..	2	11	3	4	..	13	52	22	11	154
CHEADLE	*	*	753	164	165	329	80	36	13	10	75	115	..	3	..	..	..	3	..	..	2	..	..	3	..	9	..	..	17	71	40	9	172
ECCLESHALL	73	75	148	37	50	87	16	7	5	3	20	36	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	..	1	12	11	2	57
GNOSALL	61	54	115	28	33	61	9	4	1	3	16	28	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2	9	11	2	34
KINGSWINFORD	304	324	628	165	169	b334	99	51	17	13	46	108	..	6	..	2	..	..	..	..	..	..	..	15	9	11	..	..	19	49	20	10	193
LEEK	228	200	428	127	95	222	62	21	10	7	61	61	..	2	3	..	..	2	..	..	..	..	..	13	..	2	4	..	11	45	26	6	108
LICHFIELD	401	385	786	192	169	c361	109	44	13	15	86	94	..	3	1	..	..	2	1	..	..	..	1	7	16	8	2	..	20	63	35	9	193
MAYFIELD	58	63	121	21	29	50	5	7	2	2	7	27	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	4	11	7	1	25
NEWCASTLE	85	103	188	47	54	d101	27	16	6	2	23	27	..	5	2	3	..	2	..	..	1	..	1	7	..	1	..	..	4	19	7	8	41
SEISDON	167	157	324	86	94	180	40	11	3	10	48	68	..	2	3	1	..	..	..	..	..	..	..	2	1	9	..	..	7	32	12	1	110

a Including 1 death which occurred outside the district, a person belonging thereto, and not including 5 deaths " " within " among persons not belonging thereto.
b Not " 37 " " " " " " " " " " "
c Including 21 " " " outside " " " belonging thereto.
d " 3 " " " " " " " " " "

* Not sub-divided.

RURAL—continued.

DISTRICT.	Population at all ages.		Mean area per person in acres.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.											
														Fevers.					
	Census, 1891.	Estimated to middle of 1896.						Smallpox.	Scarlatina.	Diphtheria.	Croup (not Spasmodic).	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.	Diarrhœa and Dysentery.	Phthisis.	Diseases of Respiratory Organs.
SEISDON	12371	13063	2·8	24·8	13·7	123	1·30	..	0·15	0·22	0·07	0·15	0·07	..	..	..	0·68	0·53	2·44
STAFFORD	10320	10680	4·8	27·5	*e* 11·9	98	0·37	..	0·09	0·09	0·09	..	..	..	..	..	0·18	1·03	1·96
STOKE-ON-TRENT	5122	5700	0·7	29·8	*f* 14·0	141	2·10	..	0·35	0·52	..	0·87	0·17	..	..	..	0·17	0·70	3·15
STONE	8174	8618	2·7	23·4	*g* 12·8	74	1·04	..	..	0·11	0·11	..	0·34	..	..	..	0·58	1·85	1·97
TAMWORTH Staffs. portion.	4770	5274	4·4	26·3	*h* 13·4	172	2·27	..	0·94	..	..	0·37	..	..	0·37	..	0·56	0·75	2·84
TUTBURY	9031	9325	2·7	29·4	*i* 14·6	138	0·85	..	0·21	..	..	0·53	..	..	0·10	..	..	0·85	2·46
UTTOXETER Staffs. portion.	7227	7427	6·3	28·2	16·2	100	0·80	..	0·13	..	..	0·13	0·13	..	..	..	0·40	1·21	2·28
WALSALL	9319	10223	1·2	35·8	*j* 15·0	153	0·97	..	0·29	..	0·19	0·09	0·39	..	0·09	..	0·09	0·48	3·52
WOLSTANTON	32773	34158	0·28	38·6	17·5	158	2·98	..	0·20	0·23	0·17	1·14	0 32	..	0·17	..	0·90	0·52	3·30
Totals and Averages	217349	225095	2·6	31·2	15·2	134	1·55	..	0·19	0·13	0·08	0·47	0·26	..	0·09	0·00	0·39	0·77	2·78

e Including 3 deaths which occurred outside the district, among persons belonging thereto, and not ,, 13 ,, ,, ,, within ,, ,, ,, not belonging thereto.

f Not ,, 8 ,, ,, ,, ,, ,, ,, ,, ,, ,,

g Including 6 ,, ,, ,, outside ,, ,, ,, belonging thereto.

h Not ,, 14 ,, ,, ,, within ,, ,, ,, not belonging thereto.

i ,, ,, 9 ,, ,, ,, ,, ,, ,, ,, ,, ,,

j Including 7 ,, ,, ,, outside ,, ,, ,, belonging thereto.

RURAL—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
																	Fevers.																
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
STAFFORD	172	122	294	64	64	*e* 128	29	8	9	3	32	47	..	1	1	1	..	..	..	..	..	..	..	..	..	2	..	..	11	21	14	10	67
STOKE-ON-TRENT ..	81	89	170	*	*	*f* 80	24	18	4	2	16	16	..	2	3	..	..	..	..	..	..	..	..	5	1	1	..	..	4	18	2	2	42
STONE	108	94	202	62	49	*g* 111	15	10	5	10	20	51	..	..	1	1	..	..	..	..	..	..	1	..	3	5	2	..	16	17	15	3	47
TAMWORTH ..... Staffs. portion.	67	72	139	36	35	*h* 71	24	10	4	2	16	15	..	5	..	..	..	2	..	..	..	..	..	2	..	3	..	..	4	15	2	..	38
TUTBURY	135	140	275	71	66	*i* 137	38	14	6	7	39	33	..	2	..	..	..	1	..	..	..	..	..	5	..	..	1	..	8	23	15	..	82
UTTOXETER ..... Staffs. portion.	98	112	210	56	65	121	21	13	2	7	42	36	..	1	..	..	..	..	..	..	..	..	..	1	1	3	..	..	9	17	17	6	66
WALSALL	197	169	366	84	70	*j* 154	56	20	9	10	24	35	..	3	..	2	..	1	..	..	..	..	2	1	4	1	..	..	5	36	15	9	75
WOLSTANTON	678	644	1322	314	285	599	209	97	15	29	132	117	..	7	8	6	..	6	..	..	10	..	2	39	11	31	1	..	18	113	60	16	271
Totals	†	†	7032	†	†	3441	949	420	139	149	787	997	..	43	30	18	..	22	1	..	14	..	7	106	59	90	14	..	175	627	335	105	1795

e Including 3 deaths which occurred outside the district among persons belonging thereto, and
not ,, 13 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.
f ,, ,, 8 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
g Including 6 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto.
h Not ,, 14 ,, ,, ,, within ,, ,, ,, ,, not belonging thereto.
i ,, ,, 9 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
j Including 7 ,, ,, ,, outside ,, ,, ,, ,, belonging thereto.

* Not sub-divided.

† Additions not given owing to want of uniformity in returns.

Table showing Result of the Working of the Compulsory Notification of Infectious Diseases Act.

NOTE.—Cases of Measles and Whooping Cough are only given when these are included in the diseases compulsorily notified. Smallpox, Scarlet Fever, Diphtheria, and Fevers alone are included in the percentage calculation of hospital cases. In cases in which the Act was not in force during the whole year, the cost has been estimated for the year on the basis of the cost during the period when in force.

Hospitals exist in those districts against which an asterisk is placed.

URBAN.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
AUDLEY.	Houses infected	..	..	44	4	..	..	2	..	..	1	..	12		
13,000.	Cases	Under 5	..	27	2	..	..	..	..	..	..	..	2		
13/10		5 & upwards	..	23	2	..	..	5	..	..	1	..	10		
Nil.	Deaths	Under 5	..	3	2	..	..	..	..	..	..	..	..	2	
		5 & upwards	..	1	1	..	..	..	..	..	1				
	Cases treated in hospital	Under 5 .... 5 & upwards													
	Deaths occurring in hospital..... ..	Under 5 .... 5 & upwards													
BIDDULPH.*	Houses infected	..	..	24	..	4	..	1	..	..	6	..	4		
5,500.	Cases	Under 5 .... 5 & upwards	..	38	..	4	..	3	..	..	6	..	4		
£1 5s. 0d.	Deaths	Under 5	..	3	1	3	..	..	..	..	..	..	..	2	2
Nil.		5 & upwards	..	..	..	..	..	..	..	..	2	..	..	1	
	Cases treated in hospital	Under 5 .... 5 & upwards													
	Deaths occurring in hospital.....	Under 5 .... 5 & upwards													

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
BILSTON.* 23,500. 19/8 23·6.	Houses infected	..	..	89	14	7	..	28	..	..	..	..	13		
	Cases	Under 5	..	118	16	7	..	31	..	..	..	..	13		
		5 & upwards													
	Deaths	Under 5		9	4	7	..	2	..	..	..	..	2	7	17
		5 & upwards	..	1	..	..	..	5							
	Cases treated in hospital	Under 5	..	9											
		5 & upwards	..	30											
	Deaths occurring in hospital	Under 5	..	1											
		5 & upwards	..	1											
BRIERLEY HILL.* 11,972. 17/11. 8·3.	Houses infected	..	..	37	1	4	..	10	..	..	2	..	8		
	Cases	Under 5	..	16	1	4									
		5 & upwards	..	37	..	..	..	18	..	..	2	..	8		
	Deaths	Under 5	..	1	1	4	..	..	..	..	..	..	..	7	
		5 & upwards	..	..	..	..	..	1	..	..	1	..	..	1	
	Cases treated in hospital	Under 5													
		5 & upwards	..	..	..	..	..	6							
	Deaths occurring in hospital	Under 5													
		5 & upwards													
BROWNHILLS.* 11,488. £1 9s. 4d. Nil.	Houses infected	..	..	..	2	..	..	3	..	..	2	..	21		
	Cases	Under 5	..	41	1										
		5 & upwards	..	52	9	..	..	9	..	..	2	..	21		
	Deaths	Under 5	..	2	..	..	..	..	..	..	..	..	..	9	7
		5 & upwards	..	1	..	..	..	1	..	..	1	..	..	1	
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5 ..													
		5 & upwards													

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
BURSLEM.*	Houses infected	..	..	184	11	3	..	40	1	..	..	..	14		
34,231.	Cases	Under 5	..	79	3	1	..	..	..	..	..	..	1		
		5 & upwards	..	105	8	2	..	45	1	..	..	..	13		
18/10.	Deaths	Under 5	..	3	4	7	..	..	..	..	..	..	..	44	14
		5 & upwards	..	3	2	3	..	9	1	..	..	..	..	2	
12·0.	Cases treated in hospital	Under 5	..	6											
		5 & upwards	..	23											
	Deaths occurring in hospital	Under 5													
		5 & upwards													
CANNOCK.*	Houses infected	..	..	123	2	2	..	5	..	..	2	..	36		
22,000.	Cases	Under 5	..	99	1	1	..	..	..	..	..	..	2		
		5 & upwards	..	113	4	1	..	5	..	..	..	..	34		
£1 9s. 6d.	Deaths	Under 5	..	3	..	1	..	..	..	..	..	..	1	23	11
		5 & upwards	..	2	..	..	..	1	..	..		..	..	2	2
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													
COSELEY.	Houses infected	..	..	176	14	2	..	9	..	..	1	..	22		
22,000.	Cases	Under 5	..	258	17	2	..	9	..	..	1	..	22		
		5 & upwards													
£1 15s. 1d.	Deaths	Under 5	..	17	1	1	..	1	..	..	..	..	1	3	7
		5 & upwards	..	9	1	..	..	..	..		1				
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
DARLASTON.*	Houses infected	..	..	29	..	2	..	4	..	..	..	..	8		
15,141.	Cases	Under 5	..	30	..	2	..	1							
		5 & upwards	..	33	..	..	..	3	..	..	..	..	8		
12/8	Deaths	Under 5	..	2	..	2	..	1	..	..	..	..	..	7	12
		5 & upwards	..	1	..	..	..	..	..	..	..	..	1	3	
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													
FENTON.*	Houses infected	..	..	144	24	..	..	27	..	..	6	..	25		
20,500.	Cases	Under 5	..	202	37	..	..	34	..	..	6	..	28		
		5 & upwards													
£1 17s. 5d.	Deaths.....	Under 5	..	5	6	..	..	..	..	..	..	..	..	29	6
		5 & upwards	..	4	4	..	..	3	..	..	..	..	..	4	5
4·3.	Cases treated in hospital	Under 5	..	8	4										
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
HANDSWORTH.*	Houses infected	..	..	224	80	2	..	24	..	..	2	..	35		
40,600,	Cases	Under 5	..	74	23	3	..	4	..	..	..	..	3		
		5 & upwards	..	230	75	..	..	20	..	..	2	..	33		
£1 8s. 9d.	Deaths	Under 5	..	3	14	1	..	1	..	..	..	..	..	5	14
		5 & upwards	..	5	10	..	..	2	..	..	1				
42·7.	Cases treated in hospital	Under 5	..	37											
		5 & upwards	..	145											
	Deaths occurring in hospital.....	Under 5	..	1											
		5 & upwards	..	4											

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
HEATH TOWN.* 7,600. £1 2s. 8d. 50·7.	Houses infected	..	..	26	6	..	..	15	..	..	..	..	4		
	Cases	Under 5	..	7	5	..	..	1							
		5 & upwards	..	26	5	..	..	21	..	..	..	..	4		
	Deaths	Under 5	..	2	1	..	.	1	..	..	..	..	..	..	3
		5 & upwards	..	..	3	..	..	7							
	Cases treated in hospital	Under 5	..	3	1										
		5 & upwards	..	21	..	..	..	8							
	Deaths occurring in hospital	Under 5	..	..	1										
		5 & upwards	..	..	..	..	..	4							
KIDSGROVE. 4,151. 14/4 Nil.	Houses infected†	..													
	Cases	Under 5 .... / 5 & upwards	..	11	2	..	..	..	..	..	..	..	10		
	Deaths	Under 5 .... / 5 & upwards	..	..	1										
	Cases treated in hospital	Under 5 .... / 5 & upwards													
	Deaths occurring in hospital	Under 5 .... / 5 & upwards													
LEEK.* 14,920. 11/6 70·7.	Houses infected	..	..	40	4	2	..	12	..	..	..	..	4		
	Cases	Under 5	..	18	1	2									
		5 & upwards	..	29	3	..	..	12	..	..	..	..	4		
	Deaths	Under 5	..	1	..	..	..	..	..	..	..	..	..	24	
		5 & upwards	..	..	1	..	..	4							
	Cases treated in hospital	Under 5	..	13	2	..	..	..	..	..	..	..	..	1	
		5 & upwards	..	26	..	..	..	5	..	.	..	..	1		
	Deaths occurring in hospital	Under 5													
		5 & upwards	..	1	..	..	..	1							

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
LICHFIELD.* 7,864. £1 2s. 10d. 71·6.	Houses infected	..	..	50	2	1	..	2	..	..	..	..	11		
	Cases	Under 5	..	20	..	1									
		5 & upwards	..	36	2	..	..	2	..	..	.	..	11		
	Deaths	Under 5	..	..	..	1	..	..	..	..	..	..	..	1	3
		5 & upwards	..	1											
	Cases treated in hospital	Under 5	..	16											
		5 & upwards	..	27											
	Deaths occurring in hospital	Under 5													
		5 & upwards													
LONGTON. 36,240. £1 2s. 0d. Nil.	Houses infected	..	..	102	80	..	..	36	..	..	3	..	31		
	Cases	Under 5	..	148	93	..	..	43	..	..	3	..	32		
		5 & upwards													
	Deaths	Under 5	..	2	13	..	..	..	..	..		..	2	78	7
		5 & upwards	..	..	9	..	..	6	..	..	3	..	..	3	
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													
NEWCASTLE.* 20,000. 5/10 11·7.	Houses infected	..	..	17	4	..	..	7	..	..	1	..	10		
	Cases	Under 5	..	21	5	..	..	8	1	..	1	..	11		
		5 & upwards													
	Deaths	Under 5	..	..	2	1	..	..	..	..	..	..	..	23	21
		5 & upwards	..	..	1	1	..	1	..	..	..	..	1	1	1
	Cases treated in hospital	Under 5	..	4											
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
PERRY BARR.* 2,600. 12/6 60·0.	Houses infected	..	..	7	1	..	..	..	..	..	..	..	3		
	Cases	Under 5	..	2											
		5 & upwards	..	7	1	..	..	..	..	..	..	..	3		
	Deaths	Under 5													
		5 & upwards													
	Cases treated in hospital	Under 5	..	1											
		5 & upwards	..	5											
	Deaths occurring in hospital..... ..	Under 5													
		5 & upwards													
QUARRY BANK.* 7,007. £1 1s. 5d. 21·1.	Houses infected	..	..	28	..	1	..	10	..	..	2	..	5		
	Cases	Under 5	..	10	..	..	..	3							
		5 & upwards	..	27	..	1	..	12	..	..	2	..	5		
	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	4	4
		5 & upwards	..	..	..	1	..	3	..	..	2				
	Cases treated in hospital	Under 5	..	..	..	..	..	2							
		5 & upwards	..	..	..	..	..	9							
	Deaths occurring in hospital.....	Under 5													
		5 & upwards	..	..	..	..	..	2							
ROWLEY REGIS.* 33,800. £1 9s. 9d. Nil.	Houses infected	..	..	260	10	10	..	26	..	..	2	..	22		
	Cases	Under 5	..	130	8	8	..	2	..	..	..	..	3		
		5 & upwards	..	191	2	2	..	30	..	..	2	..	24		
	Deaths	Under 5	..	9	2	5	..	1	..	..	..	..	..	49	25
		5 & upwards	..	5	..	1	..	5	..	..	..	..	2	1	2
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
RUGELEY. 4,500. £2 0s. 0d. Nil.	Houses infected	..	..	47	11	..	..	3	..	..	..	..	4		
	Cases	Under 5	..	11	3										
		5 & upwards	..	42	9	..	..	3	..	..	..	..	4		
	Deaths	Under 5	..	..	3										
		5 & upwards	..	1											
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													
SEDGLEY.* 15,000. £6 13s. 8d. Nil.	Houses infected † ..	..													
	Cases	Under 5	..	373	231	29	..	139	..	..	2	..	30		
		5 & upwards													
	Deaths.....	Under 5	..	8	14	8	..	..	..	..	..	..	..	22	
		5 & upwards	..	1	1	2	..	20	..	..	1	..	1	1	
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
SMETHWICK.* 43,000. £1 3s. 1d. Nil.	Houses infected	..	..	188	29	2	..	24	..	..	2	..	67		
	Cases	Under 5	..	77	8	2	..	4	..	..	..	..	10		
		5 & upwards	..	186	24	..	..	27	..	..	2	..	57		
	Deaths	Under 5	..	3	2	..	..	1	..	..	..	..	..	40	12
		5 & upwards	..	5	2	..	..	8	..	..	1	..	2	2	
	Cases treated in hospital	Under 5	..												
		5 & upwards	..												
	Deaths occurring in hospital.....	Under 5	..												
		5 & upwards	..												

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
STAFFORD.*	Houses infected	..	1	80	9	..	..	7	..	..	2	..	14		
19,900.	Cases	Under 5	3	101	18	..	..	7	..	..	2	..	15		
18/4.		5 & upwards													
74·4.	Deaths	Under 5	..	4	5	..	..	1	..	..	..	..	1	2	3
		5 & upwards													
	Cases treated in hospital	Under 5	3	88	3	..	..	2							
		5 & upwards													
	Deaths occurring in hospital	Under 5	..	4	1	..	..	1							
		5 & upwards													
STOKE-ON-TRENT.*	Houses infected	..	..	106	21	3	..	50	..	..	1	..	50		
26,960.	Cases	Under 5	..	50	4	2	..	2							
£1 5s. 0d.		5 & upwards	..	82	19	1	..	54	..	..	1	..	55		
18·0.	Deaths	Under 5	..	3	1	1	..	1	..	..	..	..	..	37	4
		5 & upwards	..	..	1	..	..	6	..	..	1	..	..	2	
	Cases treated in hospital	Under 5	..	1											
		5 & upwards	..	17	2	..	..	18							
	Deaths occurring in hospital	Under 5													
		5 & upwards	..	1	1	..	..	3	..	..	..	..	2		
STONE.*	Houses infected	..	..	17	3	..	..	..	..	..	1	..	3		
6,045.	Cases	Under 5	..	16	2										
13/3.		5 & upwards	..	7	3	..	..	..	..	..	1	..	3		
57·1.	Deaths	Under 5	..	2	1	..	..	..	..	..	..	..	..	3	
		5 & upwards	..	1	2	..	..	..	..	..	1				
	Cases treated in hospital	Under 5	..	12											
		5 & upwards	..	4											
	Deaths occurring in hospital	Under 5 ..	..	1											
		5 & upwards	..	1											

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
TAMWORTH.*	Houses infected	..	..	8	..	..	..	..	..	..	..	..	14		
	Cases	Under 5													
7,121.		5 & upwards	..	9	..	..	..	..	..	..	..	..	14		
	Deaths	Under 5													
8/-		5 & upwards													
	Cases treated in hospital	Under 5													
100·0.		5 & upwards	..	9											
	Deaths occurring in hospital..... ..	Under 5													
		5 & upwards													
TETTENHALL.*	Houses infected	..	..	34	33	..	..	1	..	..	..	..	5		
	Cases	Under 5	..	15	9	..	..	..	..	..	..	..	1		
5,434.		5 & upwards	..	35	31	..	..	1	..	..	..	..	4		
	Deaths	Under 5	..	..	4										
£2 4s. 2d.		5 & upwards													
	Cases treated in hospital	Under 5	..	8											
35·1.		5 & upwards	..	24											
	Deaths occurring in hospital.....	Under 5													
		5 & upwards	..	2											
TUNSTALL.*	Houses infected 79..	..													
	Cases	Under 5	..	13	..	1	..	..	..	..	..	..	1		
16,510.		5 & upwards	..	62	1	..	..	19	..	..	4	..	13		
	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	1	1	18
17/3.		5 & upwards	..	..	..	..	..	4	..	..	2	..	..	..	1
	Cases treated in hospital	Under 5													
5·2.		5 & upwards	..	3	..	..	..	2							
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
UTTOXETER. †	Houses infected	..	..	3	2	..	..	..	..	..	..	..	2		
4,800.	Cases	Under 5	..	..	..	..	..	..	..	..	..	..	1		
		5 & upwards	..	3	2	..	..	..	..	..	..	..	1		
8/7.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	..	3
		5 & upwards	..	..	1	..	..	..	..	..	..	..	1		
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
WEDNESFIELD.* ‡	Houses infected	..	..	4	2	1									
4,517.	Cases	Under 5	..	2	3	2									
		5 & upwards	..	2	..	..	..	..	..	..	..	..	1		
7/4.	Deaths	Under 5	..	..	..	2	..	..	..	..	..	..	..	..	5
		5 & upwards													
22·2.	Cases treated in hospital	Under 5	..	1											
		5 & upwards	..	1											
	Deaths occurring in hospital	Under 5													
		5 & upwards													
WILLENHALL.*	Houses infected	..	..	24	6	..	..	18	..	..	2	..	13		
18,301.	Cases	Under 5	..	10	1	..	..	3							
		5 & upwards	..	24	5	..	..	24	..	..	2	..	14		
11/4.	Deaths	Under 5	..	1	..	..	..	..	..	..	..	..	..	1	9
		5 & upwards	..	..	1	..	..	3	..	..	1				
7·4.	Cases treated in hospital	Under 5	..	..	..	..	..	1							
		5 & upwards	..	..	..	..	..	4							
	Deaths occurring in hospital	Under 5													
		5 & upwards													

† Date of introduction, August, 1896. ‡ Date of introduction, March, 1896.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
BLORE HEATH. ‡‡	Houses infected	..	..	1	4	..	..	1	..	..	..	..	3		
2,227.	Cases	Under 5	..	2											
		5 & upwards	..	4	6	..	..	1	..	..	.	..	3		
17/11.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	..	2
		5 & upwards	..	..	1	..	..	1							
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
CANNOCK. *	Houses infected	..	..	32	25	1	..	4	..	..	..	..	31		
15,684.	Cases	Under 5	..	19	4										
		5 & upwards	..	32	28	2	..	9	..	..	..	..	31		
19/10.	Deaths	Under 5	..	..	1	..	..	..	..	..	..	..	..	2	11
		5 & upwards	..	..	3	2	..	2							
4·3.	Cases treated in hospital	Under 5													
		5 & upwards	..	..	..	..	..	4							
	Deaths occurring in hospital	Under 5													
		5 & upwards	..	..	..	..	..	1							
CHEADLE.	Houses infected † ..	..													
22,302.	Cases	Under 5	..	29	6										
		5 & upwards	1	35	7	..	..	14	..	..	9	..	7		
12/1.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	2	
		5 & upwards	..	3	..	..	..	3	..	..	2	..	..	1	
Nil.	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													

‡ Tent available. † Not specified.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
ECCLESHALL. *	Houses infected	..	..	17	10	1	..	1	..	..	..	..	1		
6,049.	Cases	Under 5	..	11	6	1									
19/-		5 & upwards	..	17	9	..	..	1	..	..	..	..	1		
27·2.	Deaths	Under 5	..	..	1	..	..	..	..	..	..	..	..	1	
		5 & upwards	..	..	2										
	Cases treated in hospital	Under 5	..	3											
		5 & upwards	..	9											
	Deaths occurring in hospital.....	Under 5													
		5 & upwards													
GNOSALL.	Houses infected ..	..	..	14	1	..	..	2	..	..	1	..	1		
4,980.	Cases	Under 5	..	5	1	..	..	1							
15/6.		5 & upwards	..	21	..	..	..	1	..	..	1	..	1		
Nil.	Deaths.....	Under 5	..	1	..	.	..	..	..	..	..	..	..	..	1
		5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	1
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
KINGSWINFORD. *	Houses infected	..	1	78	1	2	..	7	..	..	..	..	10		
20,724.	Cases	Under 5	..	44	1	2	..	2							
15/5.		5 & upwards	1	59	..	..	..	9	..	..	..	..	10		
21·5.	Deaths	Under 5	..	7	1	2	..	..	..	..	..	..	..	14	9
		5 & upwards	..	2	..	..	..	1	..	..	..	..		1	1
	Cases treated in hospital	Under 5	..	7	..	..	..	1							
		5 & upwards	..	16	..	..	..	1							
	Deaths occurring in hospital.....	Under 5	..	1											
		5 & upwards	..	2											

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
LICHFIELD. *	Houses infected	..	..	61	19	..	..	8							
24,699.	Cases	Under 5	..	18	3	..	..	1							
15/-		5 & upwards	..	68	17	..	..	27	..	..	1	..	15		
12·6.	Deaths	Under 5	..	1	1	..	..	..	1	..	..	..	..	7	16
		5 & upwards	..	2	..	..	..	2	..	..	..	..	1		
	Cases treated in hospital	Under 5	..	3											
		5 & upwards	..	14											
	Deaths occurring in hospital	Under 5													
		5 & upwards													
MAYFIELD. †	Houses infected	..	..	10	1	..	..	..	..	..	1	..	1		
4,160.	Cases	Under 5	..	2											
18/-		5 & upwards	..	15	1	..	.	..	..	..	1	..	1		
Nil.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	1	
		5 & upwards	..	..	..	..	..	..	..	..	1				
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5													
		5 & upwards													
NEWCASTLE.	Houses infected	..	..	32	8	5	..	7	..	..	..	..	48		
6,904.	Cases	Under 5	..	10	1	3									
£2 1s. 3d.		5 & upwards	..	36	7	2	..	7	..	..	..	..	48		
Nil.	Deaths	Under 5	..	2	2	2	..	..	..	..	..	..	..	7	
		5 & upwards	..	3	..	1	..	2	..	..	1	..	1		
	Cases treated in hospital	Under 5													
		5 & upwards													
	Deaths occurring in hospital	Under 5 ..													
		5 & upwards													

† Date of introduction, May, 1896.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
SEISDON. *	Houses infected	..	..	20	12	1	..	3	..	..	..	..	8		
13,063.	Cases	Under 5	..	16	3	1									
17/2.		5 & upwards	..	48	11	..	..	3	..	..	..	..	8		
61·7.	Deaths	Under 5	..	1	1	1	..	..	..	..	..	..	..	2	1
		5 & upwards	..	1	2										
	Cases treated in hospital	Under 5 .... / 5 & upwards	..	47	1	..	..	2							
	Deaths occurring in hospital.....	Under 5 .... / 5 & upwards													
STAFFORD. *	Houses infected	..	..	25	10	..	..	1	..	..	..	..	5		
10,680.	Cases	Under 5	..	2											
13/4.		5 & upwards	..	36	13	..	..	1	..	..	..	..	5		
69·2.	Deaths	Under 5													
		5 & upwards	..	1	1	1									
	Cases treated in hospital	Under 5	..	3	1										
		5 & upwards	..	28	4										
	Deaths occurring in hospital.....	Under 5													
		5 & upwards	..	1	1										
STOKE-ON-TRENT. *	Houses infected	..	..	44	2	..	..	1							
5,700.	Cases	Under 5 .... / 5 & upwards	..	44	8	1	..	2	..	..	1	..	2		
£1 5s. 5d.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	4	1
48·1.		5 & upwards	..	2	3	..	..	..	..	..	..	..	..	1	
	Cases treated in hospital	Under 5 .... / 5 & upwards	..	26											
	Deaths occurring in hospital.....	Under 5 .... / 5 & upwards													

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
STONE.*	Houses infected	..	..	5	3	1	..	2	..	..	..	..	5		
8,618.	Cases	Under 5	..	6											
		5 & upwards	..	2	5	..	..	4	..	..	..	..	5		
6/4.	Deaths	Under 5	..	..	1	1	..	..	..	..	..	..	1	..	3
		5 & upwards													
17·6.	Cases treated in hospital	Under 5 .... / 5 & upwards	..	2	1										
	Deaths occurring in hospital.....	Under 5 .... 5 & upwards													
TAMWORTH.*	Houses infected ..	..	..	47	..	..	..	2	..	..	..	..	3		
5,274.	Cases	Under 5	..	13											
		5 & upwards	..	61	..	..	..	2	..	..	..	..	3		
£1 17s. 5d.	Deaths.....	Under 5	..	4	..	.	..	..	..	..	..	..	..	2	
		5 & upwards	..	1	..	..	..	2							
85·5.	Cases treated in hospital	Under 5	..	9											
		5 & upwards	..	56											
	Deaths occurring in hospital	Under 5 .... 5 & upwards													
TUTBURY.	Houses infected	..	..	20	1	..	..	2	..	..	..	..	4		
9,325.	Cases	Under 5	..	13											
		5 & upwards	..	26	1	..	..	2	..	..	..	..	4		
12/4.	Deaths	Under 5	..	1	..	..	..	..	..	..	..	..	..	5	
		5 & upwards	..	1	..	..	..	1							
Nil.	Cases treated in hospital	Under 5 .... 5 & upwards													
	Deaths occurring in hospital.....	Under 5 .... 5 & upwards													

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
UTTOXETER. †	Houses infected	..	..	11	13	..	..	..	..	..	..	..	1		
7,427.	Cases	Under 5	..	4	5										
		5 & upwards	..	9	15	..	..	..	..	..	..	..	1		
£1 7s. 5d.	Deaths	Under 5	..	..	..	..	..	..	..	..	..	..	..	..	1
		5 & upwards	..	1	..	..	..	..	..	..	..	..	..	1	
Nil.	Cases treated in hospital	Under 5 .... 5 & upwards													
	Deaths occurring in hospital	Under 5 .... 5 & upwards													
WALSALL.	Houses infected	..	..	37	8	2	..	3	..	..	..	..	4		
10,223.	Cases	Under 5	..	23	..	2	..	1	..	..	..	..	2		
		5 & upwards	..	36	9	..	..	2	..	..	..	..	2		
18/10.	Deaths.....	Under 5	..	2	..	2	..	..	..	..	..	..	1	1	4
		5 & upwards	..	1	..	..	..	1	..	..	..	..	1		
Nil.	Cases treated in hospital	Under 5 .... 5 & upwards													
	Deaths occurring in hospital	Under 5 .... 5 & upwards													
WOLSTANTON.*	Houses infected	..	..	135	25	22	..	22	2	..	10	..	62		
34,158.	Cases	Under 5	..	89	11	16	..	1	..	..	..	..	4		
		5 & upwards	..	104	14	6	..	21	2	..	10	..	58		
£1 4s. 7d.	Deaths.....	Under 5	..	6	6	5	..	..	..	..	..	..	2	37	11
		5 & upwards	..	1	2	1	..	6	..	..	10	..	..	1	
33·8.	Cases treated in hospital	Under 5	..	16											
		5 & upwards	..	59	1	..	..	12							
	Deaths occurring in hospital	Under 5 .... 5 & upwards	..	..	..	..	..	3							

† Date of introduction, August, 1896.

Summary of Sanitary Inspectors' Work.

URBAN.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.					Precautions against infectious disease.						
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things
Audley. 13,000.	Inspections & observations made	..	..	8	..	..	48	129	Frequently visited.	Frequently visited.	..	207	3	..	276		..	..	24	2	..	..	..	..											
	Formal notices by authority	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..	..	..	..	..											
	Nuisances abated after notice	..	..	8	..	..	..	..			..	..	3	..	..	..	..	..	..	..	..	..	..	..											
Biddulph. 5,500.	Inspections & observations made																											1						
	Formal notices by authority																																	
	Nuisances abated after notice																																	
Bilston. 23,500.	Inspections & observations made	17	5	10	..	48	40	44	14	74	44	10643	34	7	13	..	36	..	6	7	..	1	2	11045											
	Formal notices by authority	7	..	5	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	16											
	Nuisances abated after notice	7	..	5	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	16	1	..	..	..	..	..	42					
Brierley Hill 11,972.	Inspections & observations made	340	..	7	..	..	15	15	12	12	48	255	1	10	14	2	1	7	1	1	..	..	..	741											
	Formal notices by authority	166	..	7	..	..	Inspected quarterly and all found clean and satisfactory.				..	..	1	..	3	2	1	7	1	1	..	..	..	189											
	Nuisances abated after notice	166	..	7	..	..					..	..	1	..	14	2	1	7	1	1	..	..	..	200	1	..	..	1	1	37	30					
Brownhills. 11,488.	Inspections & observations made																																	
	Formal notices by authority																																	
	Nuisances abated after notice																																	

Suggested form of Inspector's Return not adopted.

URBAN—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Burslem. 34,231.	Inspections & observations made	146	100	34	28	132	125	44	36	80	67	2700	25	1544		114		..	..	..	..	..	..	5175											
	Formal notices by authority	32	14	6	13	..	7	3	..	5	4	95	8	76	18	11	85	2	4	1	..	..	17	401										
	Nuisances abated after notice	32	14	6	9	..	7	3	..	5	4	95	8	76	18	11	85	2	4	1	..	..	15	395	2	..	..	..	..	29	100	11				
Cannock. 22,000.	Inspections & observations made	..	3	1	..	..	..	..	..	111	9	66	1	2	5	8	33	..	6	..	..	..	3	248											
	Formal notices by authority	..	3	1	..	..	..	..	..	111	9	66	1	2	5	8	33	..	6	..	..	..	3	248											
	Nuisances abated after notice	..	3	1	..	..	..	..	..	111	9	60	1	2	4	8	32	..	5	..	..	..	3	239	..	..	..	49	49						
Coseley. 22,000.	Inspections & observations made	249	84	8	5	..	45	166	88	120	182	163	39	..	2	..	24	100	16	31	..	..	11	1333											
	Formal notices by authority	149	50	8	Closed.	..	..	24	4	1	2	74	..	..	2	..	24	..	16	31	..	..	11	401											
	Nuisances abated after notice	149	50	8		..	..	24	4	1	2	74	..	..	2	..	24	..	16	31	..	..	11	401	..	..	..	..	..	..	150	4				
Darlaston. 15,141.	Inspections & observations made	..	..	11	..	..	52	52	48	52	159	2523	10	38	25	..	..	..	..	6	..	..	4	2980											
	Formal notices by authority	..	..	11	..	..	..	..	..	..	..	..	10	38	25	..	..	..	..	6	..	..	4	94											
	Nuisances abated after notice	..	..	11	..	..	..	..	..	..	..	..	10	38	25	..	..	..	..	6	..	..	4	94	..	..	..	..	..	..	9					
Fenton. 20,500.	Inspections & observations made																																		
	Formal notices by authority																																		
	Nuisances abated after notice																																		

Suggested form of Inspector's Return not adopted.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Handsworth 40,600.	Inspections & observations made	138	190	32	..	..	135	67	115	185	..	848	203	192	421	172	541	22	..	195	..	22	105	3583											
	Formal notices by authority	21	28	5	..	..	..	4	5	6	..	144	40	64	87	41	119	5	..	43	..	4	29	645											
	Nuisances abated after notice	20	27	5	..	..	..	4	5	5	..	133	40	61	80	38	119	5	..	43	..	3	28	616	1	..	..	12	3	255	314					
Heath Town. 7,600.	Inspections & observations made	375	147	79	56	..	79	216	37	118	..	453	116	21	383			45	9	119	..	..	16	2269											
	Formal notices by authority	53	34	4	2	..	..	..	..	..	..	59	22	..	36	9	43	2	2	22	..	..	5	293											
	Nuisances abated after notice	53	34	4	2	..	..	..	..	..	..	59	22	..	36	9	43	2	2	22	..	..	5	293	..	..	..	1	6	47	32					
Kidsgrove. 4,151.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																	
	Formal notices by authority																																		
	Nuisances abated after notice																																		
Leek. 14,920.	Inspections & observations made	16	7	2	4	1	6	71	41	36	48	21	4	11	7	2	53	..	2	4	1	16	21	374											
	Formal notices by authority	16	7	2	4	1	..	4	1	1	2	21	4	11	7	2	53	..	2	4	1	7	21	171											
	Nuisances abated after notice	16	7	2	4	1	..	4	1	1	2	21	4	11	7	2	43	..	2	4	1	7	18	158	..	..	..	..	..	595	23	3				
Lichfield. 7,864.	Inspections & observations made	4	15	3	6	..	20	14	14	13	..	150	36	10	26	10	38	2	12	7	2	3	34	419											
	Formal notices by authority	4	12	3	6	..	2	1	..	1	..	110	16	8	17	10	11	2	11	7	2	3	31	257											
	Nuisances abated after notice	4	15	3	6	..	2	1	..	1	..	110	16	8	17	10	11	2	11	7	2	3	31	260	..	..	..	..	..	..	49	1				

URBAN—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Longton. 36,240.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																															
	Formal notices by authority																																
	Nuisances abated after notice.....																												90	40				
Newcastle. 20,000.	Inspections & observations made	510	120	9	7	48	70	70	40	68	..	600	25	130	12	15	10	18	60	8	..	..	..	1820										
	Formal notices by authority	169	80	9	7	1	7	2	2	6	..	125	10	11	12	15	10	8	9	2	..	..	..	485										
	Nuisances abated after notice.....	167	78	9	7	1	7	2	2	6	..	123	10	10	11	15	9	8	9	2	..	..	..	476	..	16	..	2	..	10	20	1			
Perry Barr. 2,600.	Inspections & observations made	205	4	..	..	..	11	40	6	..	..	961	7	..	1	..	34	375	2	..	..	..	1	1647										
	Formal notices by authority	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	3										
	Nuisances abated after notice.....	..	4	..	..	..	..	1	..	..	..	217	7	..	1	..	34	..	2	..	..	..	1	267	..	..	..	3	1	1	8				
Quarry Bank 7,007.	Inspections & observations made	40	36	15	5	..	25	25	14	10	..	357	23	5	..	16	..	250	36	30	..	..	48	941										
	Formal notices by authority	36	24	13	5	..	..	..	..	2	..	..	13	..	..	16	..	39	20	20	..	..	20	210										
	Nuisances abated after notice.....	36	24	13	2	..	..	..	..	2	..	..	13	..	..	13	..	39	20	18	..	..	20	202	1	..	..	30	20	24	36	2			
RowleyRegis 33,800.	Inspections & observations made	321	4	5	9	..	61	114	..	96	92	4923	11	..	4	..	13	267	69	16	..	..	..	6005										
	Formal notices by authority	44	4	5	3	..	1	2	..	..	6	122	11	..	4	..	13	16	15	16		..	..	262										
	Nuisances abated after notice.....	44	4	5	3	..	1	2	..	..	4	122	11	..	4	..	13	16	15	16	..	..	..	260	..	..	..	27	23	1468	415	..	..	..	1	1

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Rugeley. 4,500.	Inspections & observations made	..	1	1	..	..	..	12	..	..	40	11	2	2	2	1	1	18	4	2	..	1	2	100											
	Formal notices by authority	..	1	..	..	..	..	..	..	..	..	11	2	2	2	1	..	..	4	2	..	..	2	27											
	Nuisances abated after notice	..	1	..	..	..	..	..	..	..	..	11	2	2	2	1	1	..	4	2	..	..	2	28	..	..	..	1	1	1	53					
Sedgley. 15,000.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																	
	Formal notices by authority																																		
	Nuisances abated after notice																																		
Short Heath. 3,373.	Inspections & observations made	674				..	24	24	3	9	..	All	..	..	..	..	..	..	All	..	..	..	26													
	Formal notices by authority																																		
	Nuisances abated after notice	1	..	4	1	..	..	..	..	..	..	2	2	..	..	..	..	4	..	1	..	..	..	26	41											
Smallthorne 5,750.	Inspections & observations made	10	30	..	..	..	20	14	8	5	..	1032	1	21	12	..	7	..	42	..	..	..	1	1203												
	Formal notices by authority	10	30	..	..	..	..	..	..	..	..	..	..	..	12	..	7	..	..	..	..	..	..	59												
	Nuisances abated after notice	10	30	..	..	..	..	..	..	..	..	..	..	..	12	..	7	..	..	..	..	..	..	59	..	..	..	..	..	..	21	3				
Smethwick. 43,000.	Inspections & observations made	12	..	..	..	..	*230	*52	*96	*80	204	1584	40	50	1340			25	50	..	8	..	220	3991												
	Formal notices by authority	3	..	..	..	..	..	..	..	..	13	392	Verbal	3	350			8	Verbal		..	..	60	829												
	Nuisances abated after notice	3	..	..	..	..	..	..	..	..	13	357	10	3	335			8	50	..	..	..	60	839	..	..	..	4	2	1760	170					

* Verbal notice given on each inspection when necessary, and notices complied with.

URBAN—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Stafford.† 21,378.	Inspections & observations made	35	208	6	3	10	23	23	23	94	..	765	33	52	173			..	..	18	2	2	8	2788											
	Formal notices by authority	..	..	..	..	..	..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	72											
	Nuisances abated after notice	..	..	..	..	..	..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	72	..	..	..	..	..	239	113				
Stoke-on-Trent. 26,960.	Inspections & observations made	12	66	6	..	52	Numerous				659	110	5	25	1	..	34	..	2	13	..	Numerous		985										
	Formal notices by authority	12	66	6	..	..	verbal				25	110	5	25	1	..	34	..	2	13	..	9	Verbal	308										
	Nuisances abated after notice	12	66	6	..	..					25	110	5	25	1	..	34	..	2	13	..	9	..	308	1	..	..	..	1	..	66				
Stone. 6,045.	Inspections & observations made	72	..	3	..	8	8	2	12	20	15	30	24	..	6	120	148	8	10	..	3	..	30	519										
	Formal notices by authority	36	..	1	..	..	..	..	6	1	15	15	12	..	3	60	74	..	5	..	..	..	15	243										
	Nuisances abated after notice	36	..	1	..	..	..	..	6	1	14	15	12	..	3	58	72	..	5	..	..	..	9	232	..	..	..	8	8						
Tamworth. 7,121.	Inspections & observations made	2	16	6	15	5	4	4	11	10	..	39	7	12	18	40	56	..	15	2	1	3	75	341										
	Formal notices by authority	2	16	6	9	..	1	3	2	4	..	39	7	5	18	40	50	..	15	2	1	3	83	306										
	Nuisances abated after notice	2	13	5	..	..	1	3	2	3	..	36	7	5	14	35	45	..	9	2	..	2	61	245	..	..	..	..	..	..	8	1				
Tettenhall. 5,434.	Inspections & observations made	..	..	3	6	..	24	38	28	24	..	91	31	..	..	..	26	114	..	2	..	..	..	387										
	Formal notices by authority	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	4										
	Nuisances abated after notice	..	..	3	..	..	..	13	4	16	..	90	30	..	..	..	24	..	..	2	..	..	..	182	..	..	..	8	11	..	45				

† Including Public Institutions.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.						Precautions against infectious disease.						
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things
Tipton. 29,816.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																	
	Formal notices by authority																																		
	Nuisances abated after notice																																		
Tunstall. 16,510.	Inspections & observations made	300	..	6	23	..	300		30	590	67	56	4	52	5	20	..	..	2	5	..	2	20	1482												
	Formal notices by authority	22	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28												
	Nuisances abated after notice	235	..	6	23	..	..	..	..	..	..	..	4	..	..	20	..	..	2	..	..	..	..	290												
Uttoxeter. 4,800.	Inspections & observations made	7	3	5	6	..	17	10	9	8	..	145	2	40	7	5	..	..	3	..	..	..	2	269												
	Formal notices by authority	7	3	5	6	..	..	..	..	..	..	..	2	2	7	..	..	..	2	..	..	..	2	36												
	Nuisances abated after notice	5	2	5	5	..	..	..	..	..	..	..	2	2	7	5	..	..	2	..	..	..	2	37	..	..	..	..	..	..	3					
Wednesbury 25,300.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																	
	Formal notices by authority																																		
	Nuisances abated after notice																																		
Wednesfield. 4,517.	Inspections & observations made	4	..	8	..	..	Inspections made but no record kept.			12	..	114	16	..	4	..	34	2	18	..	..	..	4	216												
	Formal notices by authority	2	..	4	..	..				1	..	24	8	..	2	..	17	1	9	..	..	..	2	70												
	Nuisances abated after notice	2	..	4	..	..				1	..	114	8	..	2	..	17	1	9	..	..	..	2	160												

URBAN—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.							
Willenhall. 18,301.	Inspections & observations made	..	3	6	..	..	16		72	63	..	1613	18	206	..	192		14	115	10	..	2	30	4574
	Formal notices by authority	2	3	11	1	..		2	13	10	..	388	9	17	..	1	54	7	14	5	..	1	10	548
	Nuisances abated after notice.....	2223																						

Food supply & water.	
Seizures of unwholesome food.	1
Samples of food taken for analysis.	..
Samples of food found adulterated.	..
Samples of water taken for analysis.	1
Samples of water condemned as unfit for use.	..

Precautions against infectious disease.	
Lots of infected bedding stored or destroyed.	18
Houses disinfected after infectious disease.	35
Schools disinfected after infectious disease.	
Prosecutions for not notifying existence of infectious disease.	
Convictions for not notifying existence of infectious disease.	
Prosecutions for exposure of infected persons or things.	
Convictions for exposure of infected persons or things.	

RURAL.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.					Precautions against infectious disease.						
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Blore Heath. 2,227.	Inspections & observations made	16	3	2	1	..	..	..	..	..	16	5	1	..	..	2	2	23	8	..	..	..	1	80											
	Formal notices by authority	12	2	1	..	..	..	..	..	..	..	3	1	..	..	1	1	17	6	..	..	..	1	45											
	Nuisances abated after notice	14	3	1	..	..	..	..	..	..	..	3	1	..	..	1	2	21	7	..	..	..	1	54	..	..	..	1	..	..	1				
Cannock. 15,684.	Inspections & observations made	6	..	1	..	..	35	35	6	4	30	16	..	..	1	16		10	3	..	..	..	7	170											
	Formal notices by authority	1	..	1	..	..	..	..	..	1	..	6	..	..	1	6		7	..	..	..	..	1	24											
	Nuisances abated after notice	1	..	1	..	..	..	..	..	1	..	6	..	..	1	6		6	..	..	..	..	1	23	..	..	..	1	1	..	52	3				
Cheadle. 22,302.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																
	Formal notices by authority																																	
	Nuisances abated after notice																																	
Eccleshall. 6,049.	Inspections & observations made	4	3	2	..	2	36		8	7	..	31	37	1	..	5	14	32	7	..	..	..	..	189											
	Formal notices by authority	4	3	2	..	..	..	..	..	..	..	24	26	1	..	4	12	24	7	..	..	..	..	107											
	Nuisances abated after notice	4	2	2	..	..	..	..	..	..	..	17	19	1	..	2	11	16	7	..	..	..	..	81	..	..	..	..	..	..	28	1	1	1		
Gnosall. 4,980.	Inspections & observations made	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	254											
	Formal notices by authority	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	81											
	Nuisances abated after notice	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50	..	..	..	..	..	..	13				

RURAL—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.					Precautions against infectious disease.						
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Kingswinford. 20,724.	Inspections & observations made	359	..	17	..	..	11	52	12	24	20	219	192	2	6	..	141	56	9	9	..	..	..	1129											
	Formal notices by authority	5	..	17	..	..	..	..	..	..	..	219	12	2	6	..	10	90	4	5	..	..	..	370											
	Nuisances abated after notice	5	..	17	..	..	..	..	..	..	..	219	12	2	6	..	10	90	4	5	..	..	..	370	..	..	..	20	19	1	116					
Leek. 12,898.	Inspections & observations made	14	6	2	15	14	90		..	10	92	62	28	13	39	18	18	32	24	14	12	2	10	515											
	Formal notices by authority	12	6	2	15	..	4		..	1	2	20	6	8	8	6	4	7	4	2	..	2	10	119											
	Nuisances abated after notice	8	4	2	13	..	4		..	1	2	18	4	6	6	5	4	5	3	2	..	2	8	97	..	..	..	..	..	482	20	4				
Lichfield. 25,519.	Inspections & observations made	5	20	9	6	1	124		..	23	157	256	37	8	43	35	85	55	43	28	..	..	25	960											
	Formal notices by authority	..	..	..	..	..	..		..	..	..	4	..	1	1	1	3	9	..	..	..	..	..	19											
	Nuisances abated after notice	5	18	9	6	..	28		..	7	7	256	37	8	42	34	85	55	40	28	..	..	20	685	..	..	..	5	2	56	70					
Mayfield. 4,160.	Inspections & observations made	3	2	3	2	..	..	..	..	..	..	5	3	..	4	2	6	5	2	1	..	..	8	46											
	Formal notices by authority	1	1	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	7											
	Nuisances abated after notice	2	1	2	2	..	..	..	..	..	..	3	2	..	3	1	4	4	1	1	..	..	5	31	..	..	..	1	1							
Newcastle. 6,904.	Inspections & observations made	18	2	4	..	..	7	7	..	4	..	20	6	..	47			498	15	..	..	..	..	628											
	Formal notices by authority	18	2	4	..	..	..	..	..	..	..	18	4	..	39			10	4	..	..	..	..	99											
	Nuisances abated after notice	10	1	4	..	..	..	..	..	..	..	10	4	..	31			320	3	..	..	..	..	383	..	..	..	7	7	..	40					

RURAL—continued.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.					Precautions against infectious disease.					
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things
Seisdon. 13,063.	Inspections & observations made	66	41	7	1	..	..	69	12	13	109	185	30	4	55	..	77	51	35	2	..	..	50	807										
	Formal notices by authority	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	217											
	Nuisances abated after notice	66	41	7	1	..	..	13	..	..	..	185	30	4	55	..	77	51	35	2	..	..	50	617	..	..	..	4	1	..	44	1	1			
Stafford. 10,680.	Inspections & observations made	Suggested form of Inspector's Return not adopted.																																
	Formal notices by authority																																	
	Nuisances abated after notice																																	
Stoke-on-Trent. 5,700.	Inspections & observations made	..	..	..	..	..	62		..	6	..	42	..	..	19	..	..	10	..	14	..	..	49	202											
	Formal notices by authority	..	..	4	..	..	..		..	..	..	32	..	..	19	..	..	..	..	14	..	..	49	118											
	Nuisances abated after notice	..	..	4	..	..	..		..	..	..	42	..	..	19	..	..	..	..	14	..	..	49	128	..	..	..	10	..	..	45	3				
Stone. 8,618.	Inspections & observations made	4	6	4	..	..	87		9	8	104	36	70	3	..	7	19	30	4	..	..	..	..	391											
	Formal notices by authority	4	5	4	..	..	..		..	..	20	23	60	..	..	2	10	17	4	..	..	..	..	149											
	Nuisances abated after notice	4	5	4	..	..	..		..	..	16	18	60	..	..	2	8	15	4	..	..	..	..	136											
Tamworth.* 5,274.	Inspections & observations made	..	6	7	2	..	30	10	7	6	†35	32	5	6	35	..	25	11	20	7	1	6	56	307											
	Formal notices by authority	..	6	8	4	..	3	2	2	1	..	20	5	4	35	..	25	13	21	7	1	6	50	213											
	Nuisances abated after notice	..	5	6	2	..	3	2	2	1	..	20	5	4	29	..	15	9	18	7	1	2	47	178	..	..	..	5	3	..	51	4				

* Staffordshire portion.

† Including Warwickshire.

District and Population.		Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.					Precautions against infectious disease.						
		Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stoved or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.
Tutbury. 9,325.	Inspections & observations made	9	44	..	..	..	..	119	..	6	..	115	41	4	43	47	17	19	38	32	..	..	117	651											
	Formal notices by authority	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	4	..	..	..	..	..	7											
	Nuisances abated after notice	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	4	..	..	..	..	..	7	..	..	..	7	3	..	26	4				
Uttoxeter.* 7,427.	Inspections & observations made	4	6	4	1	..	175		11	12	..	48	7	16	13	2	..	30	12	..	..	1	..	342											
	Formal notices by authority	4	6	2	1	..	..	..	..	1	..	8	4	3	3	..	..	17	7	..	..	1	..	57											
	Nuisances abated after notice	4	6	4	1	..	..	..	..	1	..	8	4	3	3	2	..	17	7	..	..	1	..	61	..	..	..	13	3	..	9	3				
Walsall. 10,223.	Inspections & observations made	1	..	11	1	..	32	43	1	5	20	547	1	1	23	..	14	54	7	..	..	..	23	784											
	Formal notices by authority	1	..	8	1	..	..	.	..	1	..	14	..	..	..	..	..	..	..	..	..	..	..	25											
	Nuisances abated after notice	1	..	11	1	..	..	..	..	1	..	14	..	..	..	..	..	..	..	..	..	..	..	28	..	..	..	6	3	..	30					
Wolstanton. 34,158.	Inspections & observations made	4	..	18	54	..	7	528	332	342	54	626	34	26	115	30	269	38	36	36	..	4	224	2777											
	Formal notices by authority	2	..	8	23	..	3	2	..	..	1	262	14	11	53	12	136	21	17	17	..	1	108	691											
	Nuisances abated after notice	2	..	8	23	..	3	2	..	..	1	262	14	11	53	12	136	21	17	17	..	1	108	691	..	..	..	..	..	148	148				

* Staffordshire portion.

Table of Vital Statistics for the year 1896; showing also the practice in each District with regard to the printing of Annual Reports, the Adoptive Acts in force, and the prominent features in the Medical Officers' Reports.

DISTRICT AND MEDICAL OFFICER.	Area in Acres.	Population estimated to middle of 1896.	Birth-rate per 1000 of Population.	Death-rate per 1000 of Population.	Deaths in Infants under one year per 1000 registered Births.	Zymotic death-rate per 1000 of Population.	Phthisis death-rate per 1000 of Population.	Annual Report printed.	Adoptive Acts. Compulsory Notification of Infectious Diseases Act, 1889.	Adoptive Acts. Infectious Diseases (Prevention) Act, 1890.*	Adoptive Acts. Public Health Acts Amendment Act, 1890.†	PROMINENT FEATURES OF REPORT.
AUDLEY..... J. Vernon, M.B.	8000	13000	38·6	15·7	111	0·69	1·15	Yes	Yes	Yes	Yes	Isolation hospital and disinfecting station much needed. Council considering question of sewage disposal.
BIDDULPH ..... T. W. H. Garstang, M.R.C.S., D.P.H.	5057	8500	34·1	16·3	138	2·0	1·63	Yes	Yes	Yes	Yes	Scavenging, by contract, not efficiently done. Sewage disposal admittedly unsatisfactory.
BILSTON..... T. Ridley Bailey, M.D.	1866	23500	36·8	19·5	181	3·14	0·89	Yes	Yes	Yes	Parts 1, 2, & 3.	New ambulance and a mortuary have been provided. Ashpits in many cases too large.
BRIERLEY HILL ..... H. D'Arcy Ellis, L.R.C.P., M.R.C.S.	1027	11972	33·1	14·6	151	2·0	1·00	Yes	Yes	Yes	No	Sewage disposal under consideration; union with Kingswinford in common scheme contemplated. Some improvements in closets and ashpits, and refuse removal better done by contractor. Public water-supply laid on to 91 houses during year.
BROWNHILLS..... J. C. Maddever, M.D.	6294	11488	47·6	16·8	115	2·0	0·69	Yes	Yes	No	No	Medical Officer of Health convinced that Council should undertake refuse removal. Many houses are still badly supplied with water; pressure should be brought on Water Company to afford better facilities.
BURSLEM ..... J. M. Taylor, L.R.C.P., L.S.A., M.R.C.S., D.P.H.	2585	34231	39·6	20·5	216	4·35	1·13	Yes	Yes	Yes	Parts 2, 3, 4, & 5.	High zymotic rate, chiefly owing to measles. Waste-water closets continue to be introduced. Still prejudice on part of parents against isolation hospital.
CANNOCK ..... J. N. Phillips, L.R.C.P., M.R.C.S.	8009	22000	35·4	17·1	164	2·36	1·22	Yes	Yes	No	No	Well-water supplies abolished in favour of public supply in 40 cases. Sewage farm should be under the direct management of the Council.
COSELEY ..... W. M. Clendinnen, L.R.C.P., M.R.C.S.	3973	22000	38·0	17·9	164	2·22	0·81	Yes	Yes	Yes	Parts 2, 3, & 5.	Public water supply laid on to 100 houses during year; polluted wells still only supply in many cases. Isolation hospital should be provided. Many insanitary closets and ashpits, and refuse removal not satisfactory. Mortuary has been provided.
DARLASTON ..... S. Partridge, M.R.C.S., L.S.A.	800	15141	41·0	21·2	183	2·77	1·25	Yes	Yes	Yes	Yes	Many houses connected with new sewers. Death-rate lowest recorded during past seven years.
FENTON ..... A. V. Griffiths, M.R.C.S., L.S.A.	1599	20500	41·2	21·2	196	3·75	0·63	Yes	Yes	Yes	Parts 2, 3, & 5.	Substitution of water-closets for privies being pushed on. Disinfecting apparatus much needed.
HANDSWORTH ..... Jas. Richmond, M.B., D.P.H.	2638	40600	25·9	13·3	145	1·99	0·96	Yes	Yes	No	Part 2.	New Bye-laws regarding streets and buildings in preparation. Many water-closets substituted for privies during year. Still a number of local wells in use.
HEATH TOWN ..... J. Green, M.R.C.S., L.S.A.	738	7600	41·3	19·3	171	3·68	0·13	Yes	Yes	Yes	No	Privy accommodation in certain localities, where enteric fever occurred, far from satisfactory. Several damp cellars.
KIDSGROVE..... J. Steele, L.R.C.P.	1082	4151	31·5	15·4	145	0·24	0·24	Yes	Yes	Yes	Yes	Excrement and refuse removal more satisfactory since undertaken by Council.
LEEK ..... J. J. Ritchie, M.R.C.S., L.S.A.	1460	14920	27·3	16·6	112	1·94	1·67	Yes	Yes	Yes	Yes	With one exception (1874), lowest death-rate for 46 years. Infant mortality smallest recorded since 1877.
LICHFIELD ..... J. Clark, M.D.	3416	7864	25·3	14·1	156	0·76	1·65	Yes	Yes	Yes	Yes	Considering question of erecting isolation hospital available for more than one disease. Many small tenements require constant attention of Sanitary Inspector. Sewerage system been extended with much benefit to outlying districts.
LONGTON ..... W. J. Dawes, M.R.C.S., L.M., L.S.A.	2000	36240	37·5	22·5	235	4·58	0·77	Yes	Yes	Yes	Parts 2 and 3.	Work of condemning insanitary property still going on. Privies being re-placed by water-closets.
NEWCASTLE ..... F. Webb, L.R.C.P., M.R.C.S.	652	20000	33·2	16·8	200	3·75	1·20	Yes	Yes	Yes	Parts 2, 3, & 5.	Old cesspool system gradually being abolished. Scavenging better done. Public water-supply laid on to 25 houses; 45 houses still supplied from local wells.
PERRY BARR..... Jas. Richmond, M.B., D.P.H.	4043	2600	35·0	11·1	154	1·15	0·38	Yes	Yes	No	Part 3.	Birmingham water-supply been extended to this district and several houses connected. New Bye-laws been sanctioned by Local Government Board.
QUARRY BANK..... T. M. Tibbetts, M.B., D.P.H.	983	7007	32·8	17·5	195	1·99	0·71	Yes	Yes	Yes	Parts 2, 3, & 5.	Loan been granted for general sewerage scheme. Many insanitary closets and ashpits, and refuse removal, by contract, badly done. Absence of spouting causing damp houses in many cases. Water-supply receiving attention; 97 houses connected with mains during year.
ROWLEY REGIS..... J. G. Beasley, L.R.C.P. Edin., L.F.P.S. Glas.	3670	33800	36·0	18·8	182	3·31	0·38	Yes	Yes	Yes	Parts 1, 2, 3, & 5.	Sewerage works at Tividale completed, and houses have now to be connected. Council considering introduction of water-carriage. Refuse removal more satisfactory. Mortuary in course of erection. Provision of isolation hospital under consideration.
RUGELEY ..... J. H. Freer, L.R.C.P., M.R.C.S.	600	4500	29·3	14·0	136	0·88	0·22	Yes	Yes	Yes	Yes	Disinfecting apparatus not yet provided. Council moving in matter of isolation hospital. Improved sewage disposal scheme under consideration. Number of old ashpits should be reduced in size and covered over.
SEDGLEY ..... J. Biggam, M.D.	3770	15000	39·4	20·0	140	5·73	0·60	Yes	Yes	Yes	Parts 2, 3, & 5.	Need for increased house accommodation. Medical Officer of Health recommends union with neighbouring districts for isolation hospital purposes. Much still remains to be done in improving the water-supply by abolishing local wells.
SHORT HEATH ..... J. T. Hartill, L.R.C.P., M.R.C.S.	1063	3373	40·3	13·6	102	1·48	Nil	Yes	No	No	No	Water-supply much more abundant since extension of Wolverhampton mains. Question of sewage disposal should be taken up by Council. Need for increased house accommodation.
SMALLTHORNE..... J. Aspinall, M.R.C.S.	529	5750	38·4	18·0	171	4·69	1·04	Yes	No	No	Part 3.	Excrement removal better done, but still room for improvement. High zymotic rate (4·69), mainly due to measles. Isolation is practically impossible in most of the houses.
SMETHWICK ..... W. F. Marsh Jackson, L.R.C.P., L.M., M.R.C.S.	1882	43000	35·9	16·6	168	2·46	0·90	Yes	Yes	Yes	Yes	Many houses connected with water mains during year. Numerous privies converted into water-closets, and many houses connected with sewers. Scavenging better done.
STAFFORD ..... F. M. Blumer, M.B.	1084	19000	29·6	14·1	101	0·90	1·75	Yes	Yes	Yes	Parts 1, 3, & 5.	Death-rate (14·1) one of the lowest on record. Lodging-houses now visited by Sanitary Inspector in place of police officer.
STOKE-ON-TRENT..... Saml. Johnson, M.D.	1720	26960	28·7	15·8	169	2·85	1·29	Yes	Yes	Yes	Yes	Remaining local well-water supplies should be abolished. Public abattoir much needed; also public mortuary. Adoption of new Bye-laws recommended.
STONE..... E. Fernie, M.D., D.P.H.	1000	6045	28·7	16·2	97	1·65	2·15	Yes	Yes	Yes	Part 3.	Sewerage scheme nearly completed, but many houses have yet to be connected. Medical Officer of Health urges extension of water-carriage system. Many local wells are still being used which are not satisfactory.
TAMWORTH..... H. J. Faussett, M.D.	285	7121	26·5	15·4	137	0·56	1·96	Yes	Yes	Yes	Yes	Ambulance and disinfector have been provided, and loan obtained for additions to isolation hospital.
TETTENHALL..... W. H. T. Winter, L.R.C.P.L., M.R.C.S., L.M.	1220	5434	27·2	10·6	114	1·28	0·92	Yes	Yes	Yes	Yes	During year, 170 houses connected with new sewers. Seventy houses been connected with water mains during year.
TIPTON ..... A. S. Underhill, M.D., D.P.H.	2697	29816	39·3	21·3	185	2·75	0·90	Yes	No	Yes	Yes	Isolation hospital should be used more. Public water-supply will soon be in general use. Refuse removal a difficult question.
TUNSTALL ..... W. Partington, M.B.	831	16510	44·3	21·0	194	1·99	1·39	Yes	Yes	Yes	Yes	Privies being changed into water-closets, and refuse removal better done. Construction of new sewage disposal works will soon be started. Delapidated property receiving considerable attention. Parents are still prejudiced against isolation hospital.
UTTOXETER ..... B. H. Herbert, M.R.C.S., L.M., L.S.A.	980	4800	27·0	16·8	130	0·83	0·83	Yes	Yes	No	No	Notification Act adopted this year. Hope privies will be abolished in favour of water-carriage. Sewage disposal scheme under consideration.
WEDNESBURY ..... W. C. Garman, M.D.	2130	25300	37·9	20·8	174	3·24	0·79	Yes	No	Yes	Parts 1, 2, 3, & 5.	Adoption of Notification Act strongly urged. Properly-equipped isolation hospital much needed.
WEDNESFIELD ..... A. Hands, L.R.C.P., M.R.C.S.	2026	4517	31·4	15·7	154	1·99	0·66	Yes	Yes	No	No	Council have now seriously taken in hand a sewerage scheme.
WILLENHALL..... J. T. Hartill, L.R.C.P., M.R.C.S.	1249	18301	35·4	17·8	187	1·31	1·14	Yes	Yes	No	Part 3.	Efficient disinfector much needed. Much useful work has been done as result of house-to-house inspection. Waste-water closets introduced in considerable number.

* Where no mention of sections appears, the whole Act has been adopted.

† " " " " parts " " " " " " "

RURAL.

Table of Vital Statistics for the year 1896; showing also the practice in each District with regard to the printing of Annual Reports, the Adoptive Acts in force, and the prominent features in the Medical Officers' Reports.

DISTRICT AND MEDICAL OFFICER.	Area in Acres.	Population estimated to middle of 1896.	Birth-rate per 1000 of population.	Death-rate per 1000 of population.	Deaths in Infants under one year per 1000 registered births.	Zymotic death-rate per 1000 of population.	Phthisis death-rate per 1000 of population.	Annual Report printed.	Adoptive Acts.			PROMINENT FEATURES OF REPORT.
									Compulsory Notification of Infectious Diseases Act, 1889.	Infectious Diseases (Prevention) Act, 1890*	Public Health Acts Amendment Act, 1890.†	
BLORE HEATH ..... F. J. Sandford, M.D. §	13662	2227	22·4	15·7	160	2·24	0·89	Yes	Yes	Yes	Part 3.	Good water-supply from reservoir. Work done in nuisance department said to be good.
CANNOCK ..... W. Hosegood, M.B.	47939	15684	32·7	17·8	152	1·40	0·82	Yes	Yes	No	Part 4.	Better water-supply required for Cheslyn Hay and Great Wyrley. Council urged to undertake refuse removal in large parishes.
CHEADLE ..... H. L. Webb, M.R.C.S., L.S.A.	55140	22302	33·7	14·7	106	0·80	0·76	No	Yes	No	Secs. 22, 24, 26 (1) 34, 35, 36, 38.	Necessity for cottage isolation hospitals becomes greater every year. Improved water-supply required for Bradley village.
ECCLESHALL ..... H. W. Gosse, L.R.C.P., L.M., M.R.C.S.	32278	6049	24·4	14·3	108	0·66	0·16	Yes	Yes	No	No	Much still remains to be done in remedying dilapidated houses. Water-supply received much attention, but parts of district still badly provided.
GNOSALL ..... W. N. Thursfield, M.D., D.P.H. **	28796	4980	23·0	12·2	78	0·60	0·40	Yes	Yes	Yes	Part 3.	Sewerage scheme for Church Eaton in progress. Water-supplies receiving attention.
KINGSWINFORD ..... H. D'Arcy Ellis, L.R.C.P., M.R.C.S.	6083	20724	30·3	16·1	157	1·97	0·91	Yes	Yes	No	No	No report beyond statistics, owing to death of Medical Officer of Health.
LEEK ..... T. E. Dakeyne, L.R.C.P., L.M., M.R.C.S.	68113	12898	33·1	17·2	144	1·70	0·85	Yes	No	No	Sec. 49.	Considerable improvement in water-supply this year. Question of sewage disposal at Endon still remains unsettled. Notification Act not yet in force.
LICHFIELD ..... J. Clark, M.D.	63219	24699	31·8	14·6	138	1·53	0·80	Yes	Yes	No	No	Medical Officer of Health approves of suggestion to provide a joint isolation hospital in central position, retaining present hospital for small-pox cases. Every probability that sewerage scheme for Chasetown will soon be carried out.
MAYFIELD ..... A. Hall, M.R.C.S.	24323	4160	29·0	12·0	41	0·24	0·96	No	Yes	No	No	Provision of cottages for isolation purposes again recommended. Cesspits very insanitary in some parts of district. Improved water-supply necessary for Waterhouses.
NEWCASTLE ..... R. H. Dickson, L.R.C.S.I., L.R.C.P.I., L.M.	19312	6904	27·2	14·6	143	2·46	0·57	Yes	Yes	Yes	Yes	Many overcrowded houses in district. Water-supply at Betley still complained of; the supply at Madeley and Leycett now almost exclusively from mains.
SEISDON ..... W. Spackman, M.D.	37542	13063	24·8	13·7	123	1·30	0·53	Yes	Yes	Yes	No	Bye-laws will soon be submitted to Local Government Board for approval. Trysull village now connected with Bilston water mains. Supply for Wombourne about to be undertaken.
STAFFORD ..... S. Butler, L.F.P.S.G., L.M., L.S.A.	52103	10680	27·5	11·9	98	0·37	1·03	Yes	Yes	Yes	Yes	Water-supply at Milford much improved.
STOKE-ON-TRENT ..... J. Swift Walker, M.D.	4309	5700	29·8	14·0	141	2·10	0·70	Yes	Yes	Sec. 4 to 9, 13 & 14, & 16 to 20.	Yes	Water-supply of Jack-hay Lane still under consideration. Amended scheme of sewerage for Bucknall will, it is hoped, soon be started.
STONE ..... E. Fernie, M.D., D.P.H.	23318	8618	23·4	12·8	74	1·04	1·85	Yes	Yes	No	No	Water mains extended, and many houses connected during year. Still parts of district badly supplied.
TAMWORTH ..... H. J. Fausset, M.D.	23353	5274	26·3	13·4	172	2·27	0·75	Yes	Yes	Yes	Yes	Authority urged to complete the scheme for the removal of the weirs.
TUTBURY ..... K. D. B. Dobbs, M.R.C.S.	25916	9325	29·4	14·6	138	0·85	0·85	Yes	Yes	No	No	No improvement in water-supply at Hanbury, and Medical Officer of Health recommends Council to bore for water. Insanitary privies at Anslow schools again referred to. Isolation hospital much needed.
UTTOXETER ..... B. H. Herbert, M.R.C.S., L.M., L.S.A.	46822	7427	28·2	16·2	100	0·80	1·21	Yes	Yes	No	Secs. 23, (1) (2) & (4), also 25 & 33 for part of dist.	General scarcity of water, owing to small rainfall during year.
WALSALL ..... J. Wood, M.B. ‡	12302	10223	35·8	15·0	153	0·97	0·48	Yes	Yes	Yes	No	Some overcrowding in district. Scavenging at Pelsall and Rushall greatly improved. Sewerage scheme for Pelsall and Rushall been adopted, and also one for Aldridge.
WOLSTANTON ..... H. Morris, L.R.C.P., M.R.C.S. ¶	9978	34158	38·6	17·5	158	2·98	0·52	Yes	Yes	Yes	Part 3.	Report contains no facts or comments beyond statistics.

* Where no mention of sections appears, the whole Act has been adopted.

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§ Present Medical Officer of Health, A. Macqueen, M.D.

** ,, ,, ,, ,, R. S. Steele, M.B.

‡ ,, ,, ,, ,, G. Martin Fox, L.R.C.P., D.P.H.

¶ ,, ,, ,, ,, T. McKay Youngson, M.B.