

[Report 1904] / Medical Officer of Health, Bucklow R.D.C., Knutsford U.D.C., Middlewich U.D.C., Winsford U.D.C., Biddulph U.D.C.

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1904.

Annual Reports

AND

VITAL STATISTICS.

The Rural District of

BUCKLOW,

AND

The Urban Districts of

**KNUTSFORD, MIDDLEWICH, WINSFORD,
AND BIDDULPH.**

PREPARED BY

T. W. H. GARSTANG, M.A., Oxon.,

M.R.C.S., L.S.A., D.P.H., Vict.,

*Fellow (Past-President of the North-Western Branch) of the
Incorporated Society of Medical Officers of Health; Fellow
of the Royal Institute of Public Health; Member of the
Sanitary Institute; &c., &c.*

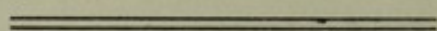
The Medical Officer of Health of the Districts.

**In accordance with Instructions from the Local
Government Board.**

Conington :

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TABLE 1.

VITAL STATISTICS FOR 1904.

	Annual Rates per 1,000 Living.			Infant Mortality— Annual Death-rate of Infants under 1 Year per 1,000 Births.
	Births.	Deaths from all Causes.	Deaths from Seven Chief Epidemic Diseases.	
England and Wales ...	27·9	16·2	1·94	146
Rural England & Wales	26·8	15·3	1·28	125
76 Great Towns ...	29·1	17·2	2·49	160
142 Smaller Towns ...	27·5	15·6	2·02	154
Bucklow Rural ...	21·9	11·6	1·0	86
Biddulph Urban ...	33·0	15·2	0·8	149
Knutsford Urban ...	26·6	16·3	1·0	139
Middlewich Urban ...	30·9	20·2	4·3	200
Winsford Urban ...	32·3	15·6	1·6	134

(See also Table on p. 4.)

BIRTHS AND DEATHS IN ENGLAND AND WALES.

It will be seen that the decline in the birth-rate which has been observable for so many years past has continued; the birth-rate for England and Wales in 1903 was 28·4 per 1,000 living, in 1904 it was 27·9. The decline is observable to an almost equal extent in rural districts and in the seventy-six great towns, the smaller towns having remained apparently stationary. There is, unfortunately, no satisfactory evidence that the infant mortality is declining; in fact, the Rate in 1904, which was 146 per 1,000 births, was considerably higher than in 1903, when it was 132. The most discouraging fact is that there is a decided increase in the infantile mortality in the seventy-six great towns, although the climatic conditions of last summer did not favour any prolonged prevalence of epidemic diarrhœa.—B.M.J., 28th January, 1905.

TABLE 2.

DETAILS OF DEATH RATES.

It may be found interesting to divide up the Death-rates into their constituent parts, for purposes of further comparison. This is done in the following Table.

DEATHS FROM	Bucklow Rural.	Biddulph Urban.	Knutsford Urban.	Middlewich Urban.	Winsford Urban.
Seven Principal Zymotic Diseases } Other Infectious Diseases }	1.01	0.76	1.03	4.33	1.64
Phthisis... ..	0.82	1.38	0.61	1.03	0.39
Influenza	0.34	—	—	—	0.39
Respiratory Diseases	1.92	3.98	1.86	2.89	4.24
Heart Disease	1.44	1.07	1.65	2.06	2.22
Violence	0.57	0.31	0.61	0.21	0.58
Alcoholism	0.09	—	0.41	0.41	0.19
Cancer	0.57	0.31	0.21	0.21	0.48
Infantile Deaths not included in any of the above ... }	1.01	3.83	2.89	3.71	2.41
Senile Deaths not included in the above }	2.16	2.15	3.30	2.47	2.12
Miscellaneous	1.60	1.38	3.51	2.88	0.97
	11.62	15.17	16.29	20.20	15.63

T. W. H. GARSTANG.

January, 1905.

(See also Table on p. 3.)

To the Chairmen and Members of the several District Councils whose Reports follow :

Gentlemen,

In presenting my tenth Annual Report for the Bucklow, Biddulph and Knutsford Districts, and ninth for the Middlewich and Winsford Districts, I ask permission very respectfully to draw attention to one or two points which are apt to be forgotten, and with which some members may perhaps never have been acquainted.

I am responsible for the Public Health of about 48,000 persons. No other Medical Officer of Health (so far as I know) who has the care of an equal population, is without some office and clerical assistance. My Districts however are independent of one another, and only temporarily associated in my hands ; so that this provision is not made for me. My only office is my private residence ; clerical assistance I have none ; and the preparation of the Annual Reports, a work of no little time and trouble (though one in which I take a pride), falls, to the smallest detail, on my individual and unaided efforts. In addition, all my seasonal and routine work claims daily attention ; consequently my time for writing is irregular and broken ; and hence the delay which each year necessarily occurs before the publication of the complete Volume.

It is sometimes asked whether it would be better to publish the Reports separately ; but this would deprive me of much professional gratification ; and each Council would lose in two ways. First, the expense of printing would be greater, because (a) there would have to be much repetition, and (b) each Council would have to pay the whole of its own bill, instead of (as at present) making a moderate contribution to a bill which I pay myself. I trust therefore that the present arrangement, which has worked well for ten years, will not be disturbed. It is convenient, as I can write certain "general subjects" once, instead of repeating them five times ; and it is useful, because I can collate and compare figures from the different Districts, in a manner which would hardly be suitable in the separate Reports. Also, each reader gets, if he cares to take it, a much larger amount of information than he

would otherwise obtain. For (in my opinion) a knowledge of the affairs of neighbouring Districts is often of great value in the management of the affairs of a particular District. Carrying this argument to its legitimate conclusion, I cordially recommend the Annual Report of the County Medical Officer of Health as a valuable book of reference for all who are genuinely interested in Sanitary and Public Health questions.

The foregoing is on this occasion of the nature of a private explanation of certain matters, and is therefore not to be regarded as a part of the Reports.

I beg to thank you, Gentlemen, for your continued confidence; and to assure you that your interests will continue to be served, to the best of his ability, by

Your obedient Servant,

T. W. H. GARSTANG.

January 2nd, 1905.



GENERAL SUBJECTS.



Printing.—In consequence of the practical difficulty of printing the Official Tables, with all their “Notes,” on pages of this size, the “Notes” are (as before) omitted from the Tables, to give more room for the figures; and, as they have been printed in full in the Reports for 1901, 1902 and 1903, they will on this occasion be omitted altogether.

Instructions.—It is of course understood that all the “Instructions” have been attended to; and that all the information asked for is given in the separate Reports.

Arrangement.—I propose to follow my usual plan, that is, to write first a certain number of paragraphs, which are intended to be considered as an integral part of each of the individual Reports which follow. The matter in the Reports is arranged in the same order that is adopted by the County Medical Officer of Health; any subjects omitted are inapplicable to the District under consideration, or because I have no means of obtaining information, or for other similar reason.

This year it is the turn of the Middlewich Report to be written first; the others will follow in the usual order.

THE OFFICIAL “TABLES.”

Many of the remarks in my Annual Report, 1900, remain applicable; especially as to the age-distribution in Table III.

I still find myself without instructions as to inclusion of deaths of residents, accidentally occurring in other Districts, and as to exclusion of deaths of strangers accidentally occurring within one of my Districts, *when the same do not occur in Public Institutions*. I have taken the liberty of making corrections for all these, so far as known to me; and will indicate the details in each Report.

ALTERATION IN DECENNIAL AVERAGES.

In all Tables, and other places, where “the average of the last ten years” is referred to as a standard, it is to be noted that this standard itself varies slightly from year to year. This time the year 1893 drops out, and the year 1903 comes in. The respective variations will be noted, where necessary, in the Reports.

ESTIMATES OF POPULATION.

These have been made with scrupulous care, so far as is possible in the absence of exact information. First I have taken the figures which would be arithmetically correct if the change in population (known to have occurred from 1891 to 1901) is proceeding at a regular and even rate. Secondly, I have had these figures revised by the Surveyor of each District, from his knowledge of new houses erected, old property abandoned or empty, and so on. I do not see that I can do more. There cannot be any great error at present; but the liability to error will increase with each year that passes.

All knowledge, on broad lines, of the sanitary condition of a District, as indicated by the number of deaths occurring within it, in a given time, in proportion to its population, **and in comparison with neighbouring Districts**, is expressed in, and derived from, the figures which are periodically calculated, and published, and called "Rates"; and it is therefore clear that no trouble is too great to take, to ensure the absolute accuracy of these figures, and this depends entirely upon a correct knowledge of the population. With a Census taken only once in 10 years, errors are unavoidable. If the Census were taken every 5 years they would be automatically reduced by about 75 per cent., and would become comparatively unimportant.

INTER-NOTIFICATION OF DEATHS OF NON-RESIDENTS.

During 1904 the following deaths have been notified in my Districts of persons whose places of residence are known to be elsewhere:—Bucklow, 8; besides 9 in the Baguley Sanatorium, 1 in the Manchester Consumption Hospital, and 2 in Small-pox Hospitals; Knutsford, 2 in the town, 47 in the Workhouse and 2 in the Gaol; Middlewich, 2; Winsford, 4 in the Infirmary; Biddulph, 1; total 78. 16 of these were dealt with by myself, transferring from one District to another; leaving 62 which I have carefully notified to the Medical Officer of Health of the District concerned; except in 5 cases where the place of residence was unknown. (Altrincham, 15; Sale, 9; Wilmslow, 6; Withington, 5; Manchester, Ashton-on-Mersey, and Northwich Rural, 3 each; Levenshulme and Hale, 2 each; Glasgow, Eccles, Walkden, Congleton, Moss Side, Sandbach, Lymm, and Nantwich Rural, 1 each).

During the same period I have received 34 similar notices of deaths belonging to my Districts occurring elsewhere; or, deducting my own 16 transfers, 18; as follows:—Northwich (Workhouse), 7; Altrincham (Infirmary), 4; Leek (Workhouse), 2; Stockport (Infirmary), Blackpool, Ashton-on-Mersey, Sandbach and Northwich Rural, 1 each.

I have published similar figures for 4 previous years, and the notices which I have voluntarily sent out, and those which I have received (*without asking for them*) are as follows:—

		SENT.		RECEIVED.	
1900	...	74	...	4	
1901	...	60	...	11	
1902	...	56	...	12	
1903	...	71	...	24	
1904	...	62	...	18	
Total		323		69	

In 1900 I received from 1 District only; in 1901 from 4; in 1902 from 4; in 1903 from 9; in 1904 from 7; from which it appears to be a fair inference that, even if I was not the first in the field, my action has distinctly helped to start a system of voluntary inter-notification.

As I have said more than once previously, there is no difficulty whatever in organising this inter-notification upon national lines. Either the Registrar of Deaths, or the Medical Officer of Health, might be made the responsible official to forward such notices to the right quarters, and scientific accuracy would be much better than the present happy-go-lucky system by which it is *hoped* that the failure to report in one District will be balanced by a similar failure in another.

PHTHISIS AND TUBERCULAR DISEASES.

The figures for the six years 1897 to 1903 were given in my last Annual Report. Reference to the following Table shows

TABLE 3.

Deaths and Death-rates.												
	1897 to 1903.				1904.				TOTAL.			
	Phthisis.	Other Tubercular Diseases.	Total.	Rate.	Phthisis.	Other Tubercular Diseases.	Total.	Rate.	Phthisis.	Other Tubercular Diseases.	Total.	Rate.
Bucklow R. ...	112	36	148	1.0	17	9	26	1.3	129	45	174	1.0
Biddulph U. ...	35	14	49	1.1	9	2	11	1.7	44	16	60	1.2
Knutsford U.	24	12	36	1.1	3	1	4	0.8	27	13	40	1.0
Middlewich U.	23	20	43	1.0	5	5	10	2.1	28	25	53	1.3
Winsford U.	63	30	93	1.3	4	2	6	0.6	67	32	99	1.2
	257	112	369	1.1	38	19	57	1.2	295	131	426	1.1

that in taking a number of years together we arrive at a remarkably uniform approximation to a Rate of 1.1. (Phthisis alone, without other tubercular diseases, 0.8). These Rates are below the County averages.

Dr. Rhodes states that one-eleventh of the total pauperism of the country may be traced to phthisis, and the ratepayers are paying a million sterling yearly as the result, whilst each year witnesses the death of 42,000 victims in England and Wales. The loss of wages owing to illness is estimated to reach a total of £10,000,000 yearly.

The National Society for the Prevention of Consumption has now been at work for three years. There is reasonable hope that knowledge of the means to combat this disease will gradually be disseminated; and that we may see, even in our own time, a marked diminution in the death-rate; whilst our successors may expect to witness the practical disappearance of the scourge from the country.

VOLUNTARY NOTIFICATION OF PHTHISIS.

This question is being discussed at present in Public Health circles. As might be expected, opinions, even among Medical Officers of Health, are various; ranging from compulsory notification to no notification at all.

TABLE 4.

Notifications of Phthisis.					
	1901	1902	1903	1904	Total.
Bucklow R. ...	2	1	6	4	13
Biddulph U. ...	0	0	1	0	1
Knutsford U. ...	1	0	0	0	1
Middlewich U.	1	2	0	2	5
Winsford U. ...	9	7	10	4	30
	13	10	17	10	50

A circular, inviting voluntary notification, was issued by each of my Councils early in 1901. It was repeated in 1902. And in 1903 it was again issued in a modified form, offering to each medical practitioner the power to decide how far his notification should involve consequent action by the Authority, or otherwise, on the admirable plan devised by Dr. Willoughby, of East-

bourne. The result is 50 notifications in 4 years; and in almost every instance the cases were in the last stages, and death followed within a few days or weeks. During the same period there have been 139 deaths from phthisis, leaving 89 unnotified even up to death. And there are also probably about 200 surviving cases. It would therefore appear that the proposal has not been received with favour by the medical profession; and the effort has proved almost abortive. I am not able to say whether there was really any active opposition; or whether it has been nothing more than sheer indifference and forgetfulness. I personally visited almost every case notified, and can certify that the patients and their friends were not the objectors; on the contrary they were pleased to receive advice and instructions.

The royal query "If preventable, why not prevented?" has been universally admitted to be reasonable. It will probably not be disputed that the Sanitary Authority is the proper body to carry out preventive measures. It only remains to point out that in dealing with a disease, the first information required (and absolutely necessary) is to know where cases exist. And therefore it seems clear that if the notifications cannot be obtained voluntarily, a demand for compulsory notification will be the natural sequel and conclusion.

At the Glasgow Congress of the Royal Sanitary Institute, 1904, the following resolution was carried by 85 votes to 11:—
 "That in view of the prevalence of pulmonary tuberculosis among the population of Great Britain, and of the suffering, pauperism, and death resulting from the dissemination of that disease, this Congress recommends the Council of the Sanitary Institute to memorialise the Local Government Boards of England and Scotland to allow local health authorities to add pulmonary tuberculosis to the schedule of notifiable diseases on such conditions as may be approved by the Local Government Boards."

At the same Congress Dr. Vacher said that as far as Cheshire, at any rate, was concerned, voluntary notification had been a failure, and that he was inclined to advise compulsory notification.

MEANS OF DISINFECTION.

There is at last a little progress to report since I wrote in detail four years ago. In none of my Districts is there yet provision for the disinfection of bedding or clothing by steam; and the disinfection of premises is effected by means which science has stated to be unreliable; such as the burning of sulphur; the liberation of compressed sulphurous acid gas; the use of the "Formic-Sulphugator"; &c. More rarely, floors are washed with chlorinated-lime water; and wall-papers stripped and renewed.

But the Bucklow Joint Hospital Board now has a scheme for providing an efficient steam disinfecter, which will serve the Bucklow Rural and Knutsford Urban Districts. The Northwich Joint Hospital Board is also erecting a Sanatorium, and it is reasonable to expect that a disinfecter will be provided; in which case the Urban Districts of Middlewich and Winsford will be accommodated. A joint Hospital for a combination of authorities is also projected near Congleton; and this will serve the Biddulph Urban District; but I do not know if it will be on a scale sufficient to warrant the expectation of a steam disinfecter. Still this is a great advance, on the whole, on the condition of affairs previously.

NOTIFIABLE INFECTIOUS DISEASES.

A glance at Table 5 shows that 1904 has been characterised by an unusual prevalence of infectious disease; only three years out of the previous fourteen showing a worse record. Table 6 shows that the most important item is the great increase in diphtheria; from which Middlewich suffered most severely, having a case-rate of no less than 13·8 per thousand; whilst Winsford, its nearest neighbour, escaped with a single case; and Biddulph, the most distant, had a case-rate of 4·6,

TABLE 5.

	Notifications.														
	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
Bucklow R. ...	39	46	107	240	182	79	65	59	46	106	96	158	102	97	117
Biddulph U....	20	22	24	15	39	25	55	17	7	118	26	21	13	28	50
Knutsford U.	—	—	—	—	—	25	12	5	6	70	18	17	8	25	17
Middlewich U.	0	9	1	123	24	53	67	31	18	23	12	8	35	26	80
Winsford U....	42	40	43	267	31	47	197	47	22	39	147	93	44	23	43
	101	117	175	645	276	229	396	159	99	356	299	297	202	199	307

which is the next most severe to Middlewich. This is evidence that the epidemics depended largely upon local conditions for their development; even if we admit that the disease is more generally prevalent than it used to be.

TABLE 6.

Notifications in 1904.									
	Estimated Population.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Erysipelas.	TOTAL.	Case-rate per 1000 of population.
Bucklow R. ...	20800	0	79	27	2	3	6	117	5.6
Biddulph U. ...	6525	0	14	30	3	1	2	50	7.7
Knutsford U. ...	4850	2	2	7	1	2	3	17	3.5
Middlewich U. ...	4850	0	5	67	0	1	7	80	16.5
Winsford U. ...	10365	0	20	1	2	0	20	43	4.1
	47390	2	120	132	8	7	38	307	6.5

DEATHS FROM ZYMOTIC DISEASES.

All of the "seven principal zymotic diseases" are, this year, in evidence.

TABLE 7.

Deaths from Zymotic Diseases in 1904.									
	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping Cough.	Diarrhoea.	TOTAL.	Rate.
Bucklow R. ...	0	2	2	1	1	7	8	21	1.0
Biddulph U. ...	0	0	4	0	1	0	0	5	0.8
Knutsford U. ...	1	0	0	1	0	1	2	5	1.0
Middlewich U. ...	0	0	8	0	9	1	3	21	4.3
Winsford U. ...	0	0	0	0	0	6	11	17	1.6
	1	2	14	2	11	15	24	69	1.5

The number in 1900 was 56, Rate 1.2; in 1901 it was 61, Rate 1.3; in 1902 it was 60, Rate 1.3; and in 1903 it was 59, Rate 1.3. For the last five years therefore we have a remarkably constant average, taking the Districts together.

The attention of the public must again be called, as has to be done in every Report, to the fact that many of these deaths could be avoided. At least 30 lives per year, in the above Districts, and mainly those of children, could be saved by the exercise of ordinary care. The ignorance of the public, especially among the working-classes, of the elements of hygiene, seems to diminish very slowly, in spite of all philanthropic and educational endeavours.

DIPHTHERIA.

The causation of this disease is a matter for investigation both interesting and important. It has frequently been ascribed to sewer gas, or other foul air; and in this connection I quote the following from Dr. Cobbett, of Cambridge:—

“Diphtheria is spread by *personal intercourse*. Old beliefs die hard; scarcely a case of diphtheria occurs but it is attributed to “drains” by friends and doctor alike. It is easier to persuade a sanitary authority to spend large sums on patching its defective sewers than to incur a much smaller expense in seeking out those who carry about diphtheria bacilli in their throats. Almost in vain one points out that diphtheria bacilli are not to be found in drains, much less in sewer gas, and that even the air of a diphtheria hospital ward, except in the immediate neighbourhood of a patient, is incapable of planting colonies of diphtheria bacilli on a serum plate.”

The remedial measures are thus described:—

“After the isolation of persons actually sick, the detection by bacteriological examination of those who go about apparently in good health, carrying in their throats or noses the diphtheria bacilli; and the isolation or control and treatment of such persons, and of convalescents from the disease, until diphtheria bacilli can no longer be cultivated from them.”

These measures are outside the bounds of practical adoption in places like Middlewich and Biddulph; but we shall be all the better for knowing the road that ought to be followed, even if at present we cannot set out upon it.

SCARLET FEVER.

Although we have had no serious outbreak during 1904, I think it well to quote from Dr. Railton a few remarks (Annual Report 1903) which are of general application:—

“In previous reports mention has been made of the serious results which occasionally arise from cases of scarlet fever which happen to remain unrecognised for a time after their onset. The way in which these cases arise is nearly always the same; the first member of the family to be ill is thought to be suffering from some harmless complaint and consequently no doctor is called in. It is only when the second case begins that suspicion is aroused that the disease may be infectious. The danger to the public of these cases is obvious. Children who are members of the family continue to go to school and to play with other children, the washing is still sent to the public laundry, and while the illness is going on no attempt is made to isolate a child who is thought perhaps to be merely suffering from an attack of indigestion. The rash is so very evanescent in some of these cases that unless specially searched for it is extremely apt to be overlooked.”

“A second cause for the spread of the disease is what we now know as a “return case,” that is the return of a patient from a hospital in a condition capable of imparting the disease to others. This is an extremely painful experience for the parents of the children involved and is calculated to lower the opinion of the public as to the usefulness of the institution. Nevertheless such a disaster has been found to be unavoidable even in the best conducted hospitals, a certain small per centage of the patients discharged proving to be “return cases.” A few such cases appear to have occurred in the Wittington district though (with the exception of one case), not among the patients who have been treated at the Baguley Sanatorium.”

MEASLES.

The following is from Dr. Wheatley's Annual Report 1896 for Blackburn:—

“ISOLATION.—In many respects the isolation of measles in a cottage house is much easier than that of scarlet fever. The difficulties that one meets with in isolating scarlet fever are many. The patient remains infective for a long period, during which time he may be feeling perfectly well. The poison is given off in large quantities from the throat and skin, and remains almost an indefinite period in an active condition. It is readily transmitted by persons and articles that have been in contact with the patient. Measles on the other hand, is extremely infectious in the early stage, i.e., during the time that the patient is feeling ill. The exact time limit of the infection is a matter of some uncertainty, and must vary, but it is, undoubtedly, very short compared with that of scarlet fever. The infective material is, probably, only given off from the nose, mouth, and eyes, so that if rags are used to wipe the discharge, and then burnt, the danger of infection is very much lessened. There is no evidence to show that the poison of measles is so tenacious of life as that of scarlet fever, or that it is so liable to be conveyed through clothing, or healthy persons who have been in contact, although, no doubt, this is possible. It is a comparatively rare thing to find measles recurring in a house two or three months after the first case even without disinfection, an occurrence which is not uncommon with scarlet fever after the most careful disinfection. *For the above reasons, I am of opinion that measles can be isolated fairly well in most cottage houses.* If the child that is ill is kept in a bedroom by itself there is little or no risk to anyone outside the house. The healthy children, of course, must be kept away from school, not so much because of the liability of conveying infection in their clothing, but because they are very liable to catch measles at home and attend school in the early stages. It would be a great help if these children from an infected house could in some way be prevented from mixing with the children of other houses.”

“No attempt has been made in the past to enforce isolation. The children have been kept away from school, and instructions have been given to the parents to keep the sick child in a room by itself. I strongly advise, however, that more vigorous measures be taken and that isolation be enforced in the same manner as in scarlet fever, and that the parents of any child suffering from measles allowing such child to be exposed in a public place be prosecuted. Such measures would have a beneficial effect in many ways. The large mortality from measles is due, to a great extent, to the fact that the disease is looked upon as trivial. No care is taken to prevent either the conveying of infection or the exposure of the patient. Insistence upon proper isolation would, to a great extent, do away with this feeling and instil into the minds of the people the serious nature of the disease.”

Dr. Wheatley had thus anticipated the advice which I now always give when measles appears. In the Winsford Report will be found recorded another successful application of the principle of enforcing what I may call family isolation. My belief is continually strengthened that this is the most rational way of dealing with measles, in places where the distribution of the population allows it.

DIARRHŒA.

To illustrate the importance of this "ailment," I draw attention to the Registrar General's Quarterly Return for the 3rd Quarter of 1904. The area covered is England and Wales. The total deaths were 133,511; and these included 30,717 due to infectious diseases; and these again included 23,235 attributed to diarrhœa. I quote the following from Dr. Niven (Annual Report 1903, Manchester):—

"From a study of the bacteriology of an acute outbreak of diarrhœa in and near Victoria Park in 1894, due to the milk from a particular farm, and from the study of an outbreak of meat poisoning at Derby, due apparently to fœcal contamination, taken in conjunction with the study of milks over a period of eight years, Professor Delépine arrived at the conclusion that these are all parts of one phenomenon, and that this is conditioned by the presence in the milk of a bacillus enteritidis identical or allied with Gaertner's."

"His observations show that this bacillus multiplies in milk after it has been drawn from the cow, and that the amount of infection in the milk depends on the time during which the milk is kept before consumption, and on the temperature to which it is exposed during transit and keeping. He further draws the conclusion that the epidemic diffusion of Summer Diarrhœa is due mainly to contamination at the farm, though not entirely, and that we must, therefore, direct our chief efforts to obtain a pure supply of milk."

* * * * *

"How, then, does the disease come to be diffused rapidly every season?"

"We may assume that the infective matter is swallowed. Were the disease transmitted to any great extent by the respiratory tract, it would be far more infectious from individual to individual than it actually is."

"We must, therefore, believe that infection is conveyed from one house to the food in another by some means."

"Now it has been very confidently asserted that house flies are the means of transmission. So far, not a shadow of evidence has been adduced, unless it be the absence of other ascertainable means of transport. Yet the proposition is not one that we can positively reject. Warm weather brings flies, and warm weather brings diarrhœa about the same time. It is certain that flies can and do carry infective matters, and the large numbers of flies which settle on food in poor households might, therefore, quite well act as carriers. In cold summers, when there is very little diarrhœa, there are few or no flies."

"These may be mere coincidences—but they may not."

* * * * *

"The subject requires further investigation and study. These propositions may be laid down meanwhile:—

1. The previous condition of infants as regards nutrition is a powerful factor in determining the death-rate from Summer Diarrhœa. We require, therefore, increasing attention directed to the instruction of mothers and girls in this subject.
2. It is probable that districts in which houses have been built on "made" ground are specially affected. If so, this may be a question of flies.
3. The chief determining factors in the seasonal variations of diarrhœa in the same areas, and among persons of the same class, are temperatures of the air and of the soil, the one being a function of the other, but not necessarily acting in the same manner.
4. Flies may be the chief agency by which the disease is transmitted. Hence,

in the diarrhoea season, all food should be protected from flies, especially milk, sugar, syrup, soups, meat, etc. ; in fact, all sweet or moist foods.

5. Cleanliness, personal and otherwise, is clearly of great importance. Infants should have clean clothing, and not be allowed to rest on the floor.

6. If any person is suffering from diarrhoea, the excreta should be disinfected.

7. Water-closets are required in place of middens and pails.

8. Mothers with infants require special instruction in the diarrhoea season, and an effort should be made to supply such instruction.

9. In warm weather the streets and passages should be watered with a view to cleanliness, and also to cooling of the air.

10. Special care must always be bestowed on milk and feeding utensils.

All milk should be kept covered over, and protected from flies and dust.

When it arrives at the house, milk should be at once well boiled and poured into a clean jug, which should then be covered with a clean cloth, and placed in a large vessel of cold water to cool. When partially cooled it should be again placed in quite cold water, and kept there.

The long tube should never be used with a feeding bottle, and all utensils used must be kept scrupulously clean.

It is not, as yet, possible to simplify these precautions."

INFANTILE MORTALITY.

The following is a condensed report of a paper by Dr. Templeman, of Dundee, at the Congress of the Sanitary Institute at Glasgow in 1904 :—

"The conditions which influenced this mortality were, he said, social and economic as well as hygienic. Among the most important factors were insanitary surroundings, drunkenness, and deficient feeding on the part of the mother. The ignorance of many women regarding the elementary principles of infant hygiene was deplorable, and in nothing was this more evident than in the matter of infant clothing and feeding. It was difficult to convince many women that the only physiological food for an infant was the milk of its mother. Infant mortality was highest where a large proportion of married women went out to work. It was impossible for working mothers to suckle their children, and another factor for the mortality was early marriages. Such marriages led to the production of immature, unhealthy infants, who died soon after birth ; while those who survived were often physical weaklings with little power of resisting disease. The mortality of breast-fed children was much lower than that of children brought up by the hand. To the contamination of milk was due zymotic diarrhoea, and it was remarkable that in most households so little pains were taken to preserve from contamination this liquid, which had such a power of absorption and was such a breeding ground for organisms. In his opinion the chief agent in milk contamination was the house fly. Sunshine and fresh air were almost as essential to the proper growth and development of the children as food, and considering the conditions under which many of the children in the slums of our large cities were reared it was not surprising that the mortality amongst these was greater than amongst those who occupied a higher position in the social scale. Much good would result from the establishment of *crèches* in connection with works where female labour was employed, so that even during working hours workers might be permitted at stated intervals to suckle their infants. Unfortunately ignorance or carelessness in this matter was not confined to the lower classes. Many mothers in the higher grades of society allowed their social enjoyment to stand in the way of this, their most obvious duty to their offspring. There was little hope of effecting any great reform with the present generation, and it seemed to him that the best hope of success lay in dealing with the rising generation, and the means of attaining it was to educate them seriously and properly in the subject of infant hygiene, and especially feeding."

In 1903 132 children died in England and Wales (out of every 1000 born) during the first year of life. Many authorities hold that the number ought not to be much over 100; whilst some enthusiasts give 50 as the maximum number of unavoidable deaths. Taking the condition of the country as it actually exists, any District may be thankful which can show a figure not very much above the 100. Of my Districts in 1904 the Bucklow Rural is the only satisfactory one. The rest have distinctly had a bad year.

BACTERIOLOGICAL EXAMINATIONS.

These valuable aids to diagnosis, in cases of enteric fever and diphtheria, are almost entirely ignored by the profession in my Districts. Two cases of diphtheria and three of enteric fever are all in which outfits have been asked for in 1904; the total number of cases notified being 132 and 8.

THE USE OF ANTITOXIN.

This remedy for diphtheria is now in such general use that medical practitioners keep their own supplies; and it is no longer necessary for any Council to keep it for issue.

DISINFECTANTS.

Researches made by Dr. Burgess, of Manchester, show the strength and value of various disinfectants to be as follows: beginning with the strongest, and continuing in order to the weakest; Biniodide of mercury, perchloride of mercury, chlorinated lime, formaldehyde, lysol, carbolic acid, izal, creolin, Jeyes' fluid, Walker's IXL disinfectant, Condy's fluid, Sanitas.

DAIRIES AND COWSHEDS.

No action was taken to enforce the Dairies' Order until 1897. Since then, more or less work has been done every year in each District; and great improvements have been effected. Nevertheless in some places much remains to be done.

I devoted considerable space to this subject in my last Volume; and, though I have accumulated a large quantity of fresh information, it is upon lines now well known, and perhaps may be omitted this year.

THE MIDWIVES' ACT.

This Act will come into operation on April 1st, 1905. Up to the end of 1904 I am informed by Dr. Vacher that only

eight women have registered in my four Cheshire Districts, two in each. This must be a very long way short of the number of midwives practising; and it promises trouble in the future. The County Council has not yet issued instructions to the District Medical Officers of Health who are to act in their respective Districts as assistants to, or deputies for, the County Medical Officer of Health. The following are the main features of the Act, in this respect, quoted from the "British Medical Journal" (reply to a correspondent):—

"The Midwives' Act of 1902 provides for the gradual extinction of all untrained and uncertified women. After the first day of April, 1905, no woman will be permitted to use the title of midwife, or any name of description implying that she is specially qualified to practise midwifery, unless she is a certified midwife and is duly registered on the midwives' roll; and after the first day of April, 1910, no woman will be permitted to attend cases of labour for gain, unless she has received a certificate from the Central Midwives' Board. A certified midwife is only entitled to attend cases of normal labour, and, whenever any emergency or a deviation from the normal occurs she must obtain medical help. The arrangements regulating the attendance of medical men when summoned by certified midwives are entirely in the hands of the local supervising authorities appointed by the County Councils throughout England and Wales. With reference to rendering assistance to poor women who are, unfortunately, in the hands of ignorant and unqualified midwives, it is a fact generally recognized that medical men can everywhere be found willing to give their professional services in cases of difficulty and danger. In all cases, however, of malpractice or negligence resulting in death, it is the undoubted duty of the medical man to refuse a certificate of death without a consultation with the Coroner of the district."

HOUSING OF THE WORKING CLASSES.

Extract from Local Government Board Circular of 23rd June, 1900.

"Parliament has made it the duty of any Local Authority entrusted with the laws relating to public health and local government to put in force from time to time, as occasion may arise, the powers with which they are entrusted so as to secure the proper sanitary condition of all premises within the area under their control, and the Board would point out that a heavy responsibility rests with the Local Authorities if they fail to give effect to the intentions of Parliament in this matter."

The following is a Report prepared by the Clerk to the Nantwich Urban District Council which appears to me valuable for instructional purposes:—

"There were four Acts of Parliament in force passed in 1885, 1890, 1894, and 1902. The Act of 1885, except as to provisions as to bye-laws for houses let in lodgings, and vans and tents, was now repealed. The principal Act was the Housing of the Working Classes Act, 1890, which repealed no less than 15 Acts of Parliament relating to the same subject, beginning with the Labouring Classes Lodging-houses Act, 1851. The Act of 1890 consisted of 103 sections with no less than six schedules. Part I. related to unhealthy areas and the machinery for carrying out this part of the Act was briefly (1), official representation from the Medical Officer of Health as to unhealthy area; (2), preparation of improvement scheme with plans and estimates; (3), advertisements of scheme; (4), Local Government Board inquiry; (5), Provisional

Order confirmed by Act of Parliament. Part II. related to unhealthy dwelling-houses and groups of unhealthy dwellings. The definition of an unhealthy dwelling-house was one which appeared to the Medical Officer to be in a state so dangerous or injurious to health as to be unfit for human habitation. The procedure was official representation by the Medical Officer, notice to abate nuisances existing, or proceedings before magistrates to obtain closing order or order for demolition. In case of groups of houses the procedure was an improvement scheme, petition and inquiry and order by Local Government Board. The question of a scheme for reconstruction of groups of unhealthy houses was one for the Council and the Local Government Board, and would be carried into effect by an order of the Local Government Board. Part III. of the Act related to lodging-houses for the working classes. The expression "lodging-house" included separated houses or cottages for the working classes, and there might be a garden of not more than half an acre provided; the estimated annual value of such garden must not exceed £3. Under the Act of 1903 the Council might provide in connection with lodging-houses or dwelling accommodation any building adapted for use as a shop, any recreation grounds, buildings or land which in the opinion of the Local Government Board would serve a beneficial purpose in connection with the requirements of the occupiers. This part of the Act could be adopted by resolution of the Council, and they would have the full power to carry it into execution. The local authority might with the consent of the Local Government Board appropriate for the purposes of this part of the Act any other land which might be for the time being vested in them or at their disposal. The Council might on land acquired or appropriated erect buildings suitable for lodging-houses, convert existing buildings, alter, enlarge, improve same, fit up, furnish, and supply the same with all requisite furniture, fittings, and conveniences. The Council might borrow for a period of 80 years on land and 60 years on buildings. No loans raised under the Act would be taken into account in limitation of borrowing. Any person in receipt of parochial relief, otherwise than relief granted on account of accident or temporary sickness should be disqualified as an occupier. Council could sell it, after seven years, with the consent of the Local Government Board, if it was found that houses were unnecessary and too expensive to be kept up. He also pointed out that there was the financial aspect of the question to consider."

HOSPITAL ISOLATION.

A short statistical report of the Bucklow Joint Hospital Board is again added. This is not a compulsory report; but I think it will be found valuable for reference by all the Councils concerned.

CONCLUSION.

I have this year largely added to the number of general subjects considered; and have endeavoured to give the latest up-to-date information on each. I have also made free use of quotations, in the hope that the eminence of the authors will lead my readers to attach due weight to their opinions; and it is without any regard to my own work that I venture to add that I consider this book well worth careful preservation as a book of reference by the members of the Councils which I have the honour and the pleasure to serve.

T. W. H. GARSTANG.

January 18th, 1905.

Middlewich Urban District.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1904.

Population at Census, 1891, 4,001.

„ „ „ 1901, 4,669.

Increase, 668.

Estimated Population in middle of 1904, 4,850.

Area of District in Acres (exclusive of area covered by water) 1,095.

Number of Inhabited Houses, 1,005.	} At Census of
Average Number of Persons per House, 4·7.		1901.

Institutions within the District receiving sick and infirm persons from outside the District: None.

Institutions outside the District receiving sick and infirm persons from the District: Union Workhouse, Northwich. Albert Infirmary, Winsford.

Other Institutions, the deaths in which have been distributed among the several localities in the District: None.

Birth Rate per 1,000 living, 30·9.

Death Rate per 1,000 living, 20·2.

Death Rate from Seven Principal Zymotic Diseases, 4·3.

Deaths under one year in proportion to 1,000 Births, 200.

Hospital: None.

Workhouse: Situated in Northwich Urban District.

Each birth or death contributes to the Rate 0·20618.

TABLE 8.

(Local Government Board Table I.)

Vital Statistics of Whole District during 1904 and Previous Years.

Name of District, MIDDLEWICH (URBAN).

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.	Under 1 Year.		At all Ages.					Number.	Rate.
				Number.	Rate per 1000 Births registered.	Number.	Rate.					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	4202	194	46.2	17	87			NO RECORDS			51	12.1
1895	4269	172	40.3	32	186	98	...			1	99	23.2
1896	4336	186	42.9	25	134	81	...			2	81	18.7
1897	4403	176	40.0	32	182	73	...			1	74	16.8
1898	4470	163	36.4	26	159	71	...			4	73	16.1
1899	4537	161	35.5	34	168	84	...			2	80	17.6
1900	4604	162	35.1	21	140	64	...			1	62	13.5
1901	4669	147	31.5	26	177	67	...			...	68	14.6
1902	4753	179	37.7	26	145	87	...			2	87	18.3
1903	4800	176	36.7	24	136	83	...			4	87	18.1
Averages for years 1894-1903	4504	172	38.2	26	151	79	...	...	...	2	76	16.9
1904	4850	150	30.9	30	200	91	...	...	...	7	98	20.2

TABLE 9.—(Local Government Board Table III.)
Cases of Infectious Disease notified during the Year 1904.
Name of District, MIDDLEWICH (URBAN).

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							No. OF CASES REMOVED TO HOSPITAL.
	At all Ages.	At Ages—Years.						
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	
Small-pox	NO HOSPITAL.
Cholera ..	..	..	..	..	..	..	..
Diphtheria ..	67	8	49	7	3	..	..
Membranous Croup	..	..	..	..	..	..	..
Erysipelas ..	7	..	3	3	1	..	..
Scarlet Fever	5	..	5	..	..	..	..
Typhus Fever	..	..	..	..	..	..	..
Enteric Fever	..	..	..	..	..	..	..
Relapsing Fever	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..
Puerperal Fever	1	..	..	..	1	..	..
Plague ..	..	..	..	..	..	..	..
Totals ...	80	8	57	10	5	..	..

TABLE 10.

(Local Government Board Table IV.)

Causes of, and Ages at, Death during Year 1904.

Name of District, MIDDLEWICH (URBAN).

CAUSES OF DEATH. 1	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Total Deaths whether of Residents or non "Residents" in Public Institu- tions in the District. 16
	2 All Ages.	3 Under 1.	4 1 and under 5.	5 5 and under 15.	6 15 and under 25.	7 25 and under 65.	8 65 and upwards.	
Small-pox	NO PUBLIC INSTITUTIONS
Measles	9	4	5	...	...	...	...
Scarlet Fever ... ..	...	...	...	...	...	...	...
Whooping-cough... ..	1	1	...	...	...	...	...
Diphtheria and Membran- ous Croup	8	...	1	7	...	...	...
Croup ... ..	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...
{ Enteric ... ..	...	...	...	...	...	...	...
{ Other continued... ..	...	...	...	...	...	...	...
Epidemic Influenza ... ..	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...
Diarrhœa	3	2	1	...	...	...	...
Enteritis ... ..	...	...	...	...	...	...	...
Puerperal Fever ... ..	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...
Other Septic Diseases ... ..	...	...	...	...	...	...	...
Phthisis	5	...	1	...	1	3	...	
Other Tubercular Diseases	5	2	3	...	...	...	...
Cancer, Malignant Disease	1	...	...	...	...	1	...
Bronchitis	10	2	1	...	...	4	3
Pneumonia	4	2	..	...	1	1	...
Pleurisy ... ..	...	...	...	...	...	...	...
Other Diseases of Respira- tory Organs ... ..	...	...	...	...	...	...	...
Alcoholism }	2	...	...	...	...	2	...
Cirrhosis of Liver }								
Venereal Diseases ... ..	...	...	...	...	...	...	...
Premature Birth	9	9	...	..	...	...	...
Diseases and Accidents of Parturition ... ..	...	...	..	...	...	...	...
Heart Diseases	10	...	...	...	2	2	6
Accidents	1	1	...	...	...	...	...
Suicides ... ..	...	...	...	...	...	...	...
Debility, &c.	5	5	...	...	...	...	...
Convulsions, &c.	3	...	3	...	...	...	...
Old Age	8	...	...	...	...	1	7
Cerebral Diseases... ..	10	2	1	...	...	3	4
Acute Rheumatism	1	...	...	...	1	...	...
All other causes	3	...	1	...	1	...	1	
All causes	98	30	17	7	6	17	21	...

TABLE 11.

Shewing Births, Birth-rate, Deaths, and General and Zymotic Death-rates, and compared with average of last 10 years; and Deaths in Old Age and Infancy, and percentage of these to Total Deaths; for the Year 1904.

TOTAL.			BIRTH RATE.		DEATH RATE.				DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.	
Births.	Deaths	Zymotic Deaths.	Average.	1904.	General.		Zymotic.		At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.
					Average.	1904.	Average.	1904.				
150	98	21	38.2	30.9	16.9	20.2	1.8	4.3	21	30	21	30

TABLE 12.

Shewing Deaths, Death-rates, Deaths from Special Diseases, and Old Age and Infantile Deaths, in the Four Quarters of the Year, 1904.

QUARTER ENDING.	Total Deaths.	Rate.	DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.		Diphtheria.	Measles.	Whooping Cough.	Diarrhoea.	ZYMOTIC DEATHS.		Phthisis.
			At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.					Total.	Rate.	
March 31	31	25.7	9	8	29	26	0	7	0	0	7	5.8	2
June 30	21	17.4	3	8	14	38	0	0	1	1	2	1.6	1
Sept. 30	24	19.7	5	8	21	33	3	0	0	2	5	4.1	1
Dec. 31	22	18.0	4	6	18	27	5	2	0	0	7	5.7	1

TABLE 13.

Births.

	M.	F.	Total.	Rate.	Of which Illegitimate.		
					M.	F.	Total.
1st Quarter	9	23	32	26·5	0	2	2
2nd „	26	16	42	34·8	2	0	2
3rd „	21	19	40	32·8	2	2	4
4th „	16	20	36	29·5	1	1	2
	72	78	150	30·9	5	5	10

TABLE 14.

Shewing position of Middlewich in the County in 1903, compared with 34 other Urban Districts.

	Best of 35 Urban Districts	Worst of 35 Urban Districts	Middle- wich Figures.	Place of Middle- wich in the List.
Birth Rate	38·8	13·6	36·7	2
Death Rate	6·6	19·2	18·1	32
Zymotic Death Rate	0·0	2·8	1·7	26
Infantile Mortality	25	200	136	26

TABLE 15.

Notifications of Infectious Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	TOTAL.
1890	—	—	—	—	—	—	—
1891	—	—	—	9	—	—	9
1892	—	—	1	—	—	—	1
1893	—	88	4	14	17	—	123
1894	—	7	1	7	9	—	24
1895	—	49	1	1	1	1	53
1896	—	55	2	2	8	—	67
1897	—	18	2	1	8	2	31
1898	—	11	3	2	2	—	18
1899	—	2	—	1	20	—	23
1900	—	4	2	—	6	—	12
1901	—	3	—	—	5	—	8
1902	—	11	10	3	11	—	35
1903	4	14	4	—	4	—	26
Total of 14 years.	4	262	30	40	91	3	430
Average of 14 years	0·3	19	2	3	6	0·2	31
1904	—	5	67	—	7	1	80

TABLE 16.

Deaths from Infectious Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping- cough.	Diarrhœa.	Puerperal Fever.	Erysipelas.	TOTAL.
1890	—	—	—	—	—	—	3	—	—	3
1891	—	1	1	1	—	6	5	—	—	14
1892	—	—	—	—	—	—	1	1	1	3
1893	—	4	3	3	1	—	6	—	1	18
1894	—	1	—	—	—	—	2	—	—	3
1895	—	1	1	—	—	7	5	1	—	15
1896	—	3	2	1	—	4	5	—	—	15
1897	—	—	—	—	6	1	4	1	—	12
1898	—	1	1	1	—	4	9	—	—	16
1899	—	—	—	—	—	—	13	—	—	13
1900	—	1	1	—	—	—	—	—	—	2
1901	—	—	—	—	6	1	5	—	—	12
1902	—	—	7	1	—	—	2	—	—	10
1903	—	—	1	—	—	3	4	—	—	8
Total of 14 years	—	12	17	7	13	26	64	3	2	144
Average of 14 Years	—	0·9	1·2	0·5	0·9	1·9	4·6	0·2	0·1	10
1904	—	—	8	—	9	1	3	—	—	21

TABLE 17.
Vaccination.

Year.	Number of Births Registered.	Successfully Vaccinated.	Insusceptible.	Had Small-pox.	Dead. Unvaccinated.	Postponed on Medical Certificate.	Removed, and Traced.	Removed, and Lost.	Conscientious Objections.	Unaccounted for.
1896	269	242	—	—	21	3	—	3	—	—
1897	267	234	1	—	23	2	1	3	3	—
1898	240	204	1	—	21	4	1	4	4	1
1899	219	184	3	—	23	1	1	3	1	3
1900	250	210	1	—	26	—	1	5	3	4
1901	225	195	2	—	22	—	2	—	3	1
1902	256	227	—	—	23	2	1	1	1	1
Total in 7 years	1726	1496	8	—	159	12	7	19	15	10
1903	246	211	—	—	23	1	—	6	2	3

TABLE 18.

Home Office Table.—Annual Report of Medical Officer of Health for 1904, for the Urban District of Middlewich. Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories (Including Factory Laundries.)	38	1	...
Workshops (Including Workshop Laundries.)	92	...	...
Workplaces	22	...	...
Homeworkers' Premises	...	...	...
Total	152	1	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Referred to H.M. Inspector.	Number of Prosecutions
	Found.	Remedied.			
<i>Nuisances under the Public Health Acts:—</i>					
Want of Cleanliness	2	2	...	...	...
Want of Ventilation ... ..	...	...	...	...	...
Overcrowding ... ..	...	...	...	...	...
Want of drainage of floors	...	...	...	...	...
Other Nuisances ... ..	...	...	...	...	...
<i>Sanitary Accommodations—</i>					
Insufficient ... ..	...	...	...	...	...
Unsuitable or defective	3	1	...	...	...
Not separate for sexes	...	...	...	...	...
Total	5	3	...	...	...

3.—OTHER MATTERS.

Class.	Number.
<i>Matters notified to H.M. Inspectors of Factories:—</i>	
Failure to affix Abstract of the Factory and Workshop Act ...	...
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act—	
Notified by H.M. Inspector	1
Reports (of action taken) sent to H.M. Inspectors	1

*Factories and Workshops on the Register at the
end of 1904:—*

Factories	...	...	...	...	...	...	...	13
Workshops	...	...	...	...	...	...	...	35
Workplaces	...	...	...	...	...	...	...	6
								—
Total	...	...	...	...	...	...	...	54
								—

TABLE 19.

Cost of Ashes Removal (1904).

No. of Ash-pits, 602; No. emptied, 2584; Loads removed 1417; cost of manual labour £46 8s. 0d.; team labour £98 14s. 0d.; total £145 2s. 0d.; cost per ash-pit per annum, 4s. 10d.

N.B.—Many ash-pits serve more than one house.

TABLE 20.

Cost of Night-soil Removal (1904).

Peat Pails :—No. in use, 200; No. emptied, 8002; manual labour, £16 13s. 7d.; team labour, £18 11s. 0d.; total, £35 4s. 7d.; cost per pail per annum, 3s. 6d.

Zinc Pails :—No. in use, 90; No. emptied, 6169; manual labour, £24 5s. 5d.; team labour, £19 5s. 7d.; total, £43 11s. 0d.; cost per pail per annum, 9s. 8d.

Cess-pools :—No. in use, 510; No. emptied, 1310; manual labour, £30 5s. 8d.; team labour, £26 18s. 4d.; total, £57 4s. 0d.; cost per cess-pool per annum, 2s. 3d.

Summary :—

	£	s.	d.	s.	d.
200 Peat-pails, 35 4 7, each	35	4	7	3	6
90 Zinc-pails, 43 11 0, each	43	11	0	9	8
510 Cess-pools, 57 4 0, each	57	4	0	2	3
	<hr/>				
	£135	19	7		
	<hr/>				

F.W.S.

TABLE 21.

Inspections made during the year 1904.

Dwelling-houses	{	Foul Conditions	6
		Over-crowding	10
	Lodging-houses	15	
	Dairies and Cowsheds	62	
	Bake-houses	20	
	Slaughter-houses	35	
	Canal Boats	110	
	Ash-pits and Privies	101	
	Manure Deposits	8	
	Water Closets	7	
House Drainage	{	Defective Traps	10
		Defective Sewers	15
	Pigstys	12	
		Suspicious Meat	2
Dwelling-houses—		Infectious Disease	152
		Factories, Work-shops, and Workplaces	112
		Total	677

F.W.S.

TABLE 22.

Summary of action with regard to Nuisances during the year 1904.

Formal Notices, 41 : abated, 27 ; in hand, 14 ; relating to dwelling-houses, 36 ; relating to other property, 5.

Informal Notices, 12 : abated, 12 ; (relating to dwelling-houses).

Total Nuisances, 53 : abated, 39 ; in hand, 14 ; relating to dwelling-houses, 48 ; relating to other property, 5.

F.W.S.

MIDDLEWICH URBAN DISTRICT.

Note.—The matter found on pages 3 and 4, and 7 to 20 inclusive, is to be considered an integral part of this Report.

Area.—Unchanged.

Population.—This is assumed to be 4,850 for 1904. See paragraph on page 8.

Tables.—See paragraph on page 7. The “average” birth-rate changes from 39·0 to 38·2; and the “average” death-rate from 17·3 to 16·9. The “average” infant mortality figure changes from 154 to 151; and the “average” zymotic death-rate from 1·9 to 1·8. These are all signs of a slight improvement in general conditions; but unfortunately the figures now presented for 1904 are more unfavourable. The birth-rate is much below the average, and the death-rate above the average; the zymotic death-rate and infant mortality figure are also unduly high.

Births.—(See Table 13). The total number is 150; which is the smallest number in the 11 years shown in Table 8, save only the 147 of 1901. The cause is not due to diminished population. There may have been fewer marriages, but of these I have no figures. Slackness of trade may be a factor, by diminishing the number of marriages; but the information at my disposal is not sufficient to enable me to offer a satisfactory explanation; and I can only record the remarkable falling off in the Rate, which is 30·9, from the average of the preceding six years which was 35·5; and that again was a marked decline from 42·7, which was the average of the five years 1893-4-5-6-7. The average of England and Wales for 1904 was 27·9.

Illegitimate Infants.—10 were registered among the 150 births, or 6·6 per cent. 3 illegitimate children died, but they were all over the age of one year. If it be right to compare them with the illegitimate births, they are 30 per cent. As 30 legitimate children died, and 140 were born, the percentage is $21\frac{1}{2}$ nearly. (See Annual Report 1902).

Deaths.—(See Table 12). The number actually registered was 91, of which 1 belonged to Sandbach, and 1 was of unknown residence; but on the other hand the number to be dealt with is increased by 9, (of which 6 occurred in the Workhouse at Northwich, 1 in the Albert Infirmary, Winsford, 1 at Marston, and 1 at Sandbach,) leaving a net number of 98, and a Rate of 20·2. Table 8 shows this to be the worst result, except in 1895, when the total number was 99, and the Rate (in a smaller

population) was 23·2. The number of deaths is 22, and the Rate is 3·3, above the average. It is due largely to deaths from zymotic diseases, deaths in infancy and old age, and deaths from respiratory diseases.

The seasonal distribution of the deaths, and the gradual building up of the Rate, are shown thus :—

		No. of deaths.		Actual Rate.
January	...	11	...	2·26798
February	...	9	...	1·85562
March	...	11	...	2·26798
April	...	9	...	1·85562
May	...	4	...	0·82472
June	...	8	...	1·64944
July	...	4	...	0·82472
August	...	10	...	2·06180
September	...	10	...	2·06180
October	...	6	...	1·23708
November	...	8	...	1·64494
December	...	8	...	1·64494
		—		—
Total	...	98	...	20·20564
		—		—

The death-rate for England and Wales for 1904 was 16·2.

Uncertified Deaths.—None.

Coroner's Inquests.—Four were held in the District; of which 1 was on a Sandbach child, drowned in the canal. The others were :—March 5th, M., 65 years, apoplexy; March 24th, M., 19 months, teething and convulsions; September 20th, M., 56 years, syncope, during tonsillitis, accelerated by alcoholism. There were also held outside the District, but on persons belonging to it, December 28th, 1903, Albert Infirmary, F., 79 years, bronchitis; January 19th, Marston, F., 3 months, found dead in bed; March 26th, Sandbach, M., 19 months, convulsions.

Comparative Position.—(Table 14). The County Medical Officer of Health's Report for 1903 enables a comparison to be made among all the Urban Districts in Cheshire. As anticipated, 1903 was rather more favourable to this District than 1902; the position in the list rising from 25th to 22nd. But even these positions were due to the generally high birth-rate. The record for 1904 bids fair to drop the District to the bottom of the list, which includes 35 Urban Districts; among which the average position of Middlewich for the past 9 years is only between 19th and 20th.

Infantile Mortality.—(Table 8). This is undoubtedly one of the factors in producing the above unfavourable result. See

general remarks on page 17; and then observe that the average figure for this District is 151, and that for 1904 it has risen to the unprecedented height of 200. This means that one child out of every five born, perishes before reaching the end of its first year. The figure for England and Wales for 1904 was 146. In my last Annual Report I wrote on this subject at considerable length; (pages 135-7); and all that I then said remains true to-day, and is emphasized by this bad return. The epidemic of diphtheria has nothing to do with this matter, as no deaths occurred from it in children under 1 year. The actual causes of the 30 deaths are given in detail in Table 10; they include 14 from premature birth, congenital debility, &c.; 7 from zymotic diseases; 4 from respiratory diseases; 2 from tubercular diseases; 2 from cerebral diseases, and 1 from accident. 14 therefore were due to the unhealthy conditions of life of the mothers, whether personal or of environment; 12 were due to causes which need not have been allowed to happen; whilst of the remaining 4 there is not sufficient information to classify them with certainty; though the probability is that they should be added to the 12 which need not have happened.

Table 8 shows that 293 deaths of infants have occurred in the 11 years 1894 to 1904; and if one-half of these were preventible, as is probably the case, there is an unnecessary waste of (roundly) 150 lives in this one small District.

Mortality among Old People.—The number of deaths among persons over 65 years of age was 21, which is 21 per cent. of all deaths. 7 died from natural decay, and 6 from heart failure. (Table 10).

Notifications of Infectious Diseases.—(Table 15). These numbered no less than 80; a case-rate of 16·5 per 1000 of population; and the largest yearly number on record except in 1893. The gravity of the figures is also increased when it is observed that 67 were notifications of diphtheria.

Deaths from Zymotic Diseases.—(Table 16). The total number is 21; the largest yearly number recorded; comparing with 8 in the previous year, and with 10 as an average. 8 deaths from diphtheria, and 9 from measles, are supplemented by 1 from whooping-cough and 3 from diarrhœa. The Rate rises to 4·3; the average of the previous 10 years being 1·8. The Rate for England and Wales for 1904 was 1·94. In the 15 years shown in the Table, the total deaths are: diarrhœa 67; whooping-cough 27; diphtheria 25; measles 22; scarlet fever 12; enteric fever 7; total 160.

Small-pox.—Fortunately absent; though there have been several cases in a neighbouring District.

Vaccination.—I am again indebted to Mr. Werrall, the Vaccination Officer, for the figures for 1903 in Table 17. In the Middlewich Sub-District of the Northwich Union (of which the town of Middlewich forms about two-thirds) in 1903 211 children were successfully vaccinated out of 223 surviving; or nearly 95 per cent. During the 8 years 1896–1903 the percentage is equally high.

Chicken-pox.—Rarely heard of; as it is rarely fatal.

Measles.—On January 11th intimation was given to the Inspector that Measles was prevalent in the National Schools; and the news reached me on the 14th. On the 19th the Vicar wrote to me that there were 109 children absent; and on the 21st the schoolmaster wrote also. On the 25th the Committee (of Council) met; and I reported as follows:—“An epidemic of Measles has broken out, affecting the school-attendance seriously; and I have advised the closing, for a period, of the schools affected. The whole of the schools have, I understand, been closed in consequence for a fortnight from the 21st. I considered this step desirable, though I confess that personally I do not expect much effect, unless it is supported by additional inspection and supervision of infected houses and families. See page 62 of my Annual Report 1902 for further details.” In accordance with my advice the Committee authorised the employment of a temporary assistant Inspector; and Mr. Roberts was engaged on the 26th but did not commence work until the 30th. From the 11th to the 30th therefore there was a regrettable want of the vigorous control which was needed; and on February 1st Mr. Roberts reported the existence of 65 cases in houses containing 74 additional children (139 cases and contacts). Under supervision however the numbers declined steadily; and at the Committee Meeting on February 22nd, I was able to report that only about 20 cases were left, all in previously infected houses; and to advise that the schools might re-open on the 29th. 7 deaths from measles occurred during the Quarter, and a circular letter of enquiry was received from the Local Government Board, to which reply was made that the infection was probably imported from the surrounding Rural District; and was spread by carelessness of parents. Some months afterwards I received striking confirmation of this view, as I was informed by a credible witness that mothers had been seen carrying their children, when covered with rash, into each other's houses, for exhibition and comparison! Another death occurred in October, but this was in the Workhouse, and not connected directly with the District; and one was certified in November as complicated with “acute laryngitis,” and as this occurred in the midst of an epidemic of diphtheria, there is a

possibility (without any disrespect to the medical attendant) that it was not true measles. The total number of deaths therefore appears as 9; and all were of children under 2 years of age.

Scarlet Fever.—Five cases notified, no deaths. An isolated case occurred in March; and then two (in one house) in September, and two in November. The four latter were closely intermingled with a number of cases of diphtheria; and again one feels somewhat doubtful of their true nature. There is undoubtedly a large child-population susceptible to scarlet fever, there having been no large number of cases since the epidemic of 1895-6. I should therefore hardly be surprised to find the disease appearing at any time; and can only express thankfulness for each year that I can report as clear.

Diphtheria.—A case of diphtheria was notified on June 18th. 5 cases occurred in July, and 1 death; 6 cases in August, and 1 death; 20 cases in September, and 1 death; 16 cases in October, and 2 deaths; 13 cases in November, and 1 death; 6 cases in December, and 2 deaths. Total, 67 cases, and 8 deaths. A special report was made to the Local Government Board and Cheshire County Council on November 5th, in accordance with Art. 18 (15) of the Local Government Board's Order of 23rd March, 1891. The yearly average of cases for 14 years has been only 2; and the disease has hardly been noticeable save in 1902 when there were 10 cases. In 1903 there were 4 cases, but only 1 of these occurred subsequently to March, so that (but for that 1 case in December) there had been a clear interval of 15 months, and it is therefore unlikely that this great outbreak in 1904 was connected with the earlier cases in 1902 and 1903. More than half the cases, including the whole of the earlier ones, were visited by myself; and the whole were visited and most carefully enquired into by the Inspector. The whole of the District was involved, and a few additional cases occurred, I believe, in the immediate neighbourhood of the boundary and outside it, of which of course I have no record. In spite of most painstaking enquiries, I regret to say we were never able to trace the channel of original invasion. (Here refer to article on diphtheria, page 14.) During the epidemic we were able to trace close connection (by contact) among the cases forming several small groups. And if to all the known cases we add slight ones, overlooked and un-notified, (of which we frequently seemed to have evidence,) and also a possible proportion of persons who carried the infection about with them, and were capable of imparting it to others, though never developing the disease themselves, it will at once be seen that a very appreciable proportion of the population must have been affected. No

bacteriological examinations were made, so far as I know. Antitoxin was used in very nearly every case. Two deaths occurred within the first week of illness; three in the second week; and the others on the 37th, 46th, and 50th days respectively. The ages at death were: 1 under 5 years; and 7 between 5 and 15 years. 7 were females, and 1 male. One particular class-room at the National School was under suspicion in September. Children from infected houses were of course excluded; but no actual closure of schools was resorted to. One particular local water supply was for a time suspected; but this theory also had to be ultimately abandoned. No explanation remains save that of personal connection.

Bacteriological Examinations.—None. See Annual Report 1903, page 141; also page 18 in this Volume.

Antitoxin.—See page 18.

Whooping-cough.—Like measles, this disease is not notifiable; and therefore nothing is heard of it unless it appears in the death returns. In 1904 one death occurred on April 15th, a child of 3 months. I instructed the Inspector to make enquiries, but nothing further was ascertained.

Enteric Fever.—No cases. Since 1899 we have had four years in which no cases have occurred; 3 cases in 1902 alone breaking the continuity of exemption. This is an exceedingly favourable condition, and one on which stress should be laid in a year which is mainly a record of misfortunes.

Diarrhœa. } I have entered in Table 10, three deaths
Enteritis. } from diarrhœa, but none from enteritis.
 They occurred on June 24th, September 12th and 13th. The two latter were children under 6 months. The former was a child of 4; and I do not believe it to have been true epidemic diarrhœa. The total is low; though it is a curious fact (Table 16) that except in 1898 and 1899 we have never had any serious number of deaths from this cause. (See page 16).

Influenza.—No deaths.

Puerperal Fever.—One case, no deaths.

The Midwives' Act, 1902.—See page 18.

Erysipelas.—7 cases, no deaths. The cases were of no importance; were scattered over the year; and occurred at ages 6, 7, 12, 19, 20, 21, and 47 years respectively.

Phthisis.—Five deaths occurred, (including 1 in the Work-house), 3 females and 2 males, at ages 1, 21, 30, 30, and 61 years. There were 21 deaths in the six years preceding, average 3·5, Rate 0·7. This year's Rate is 1·03. For 7 years therefore the total is 26, the average 3·7, and the Rate 0·75.

Other Tubercular Diseases.—5 deaths, all under 2 years of age; 3 females, 2 males. 2 are ascribed to meningitis, and 3 to disease of the mesenteric glands and peritoneum.

Notification of Phthisis.—Two notifications were received in 1904; making a total of 5 in 4 years, (see page 10).

Cancer.—Only 1 death; F., 64 years, (uterus). Rate 0·2.

Pulmonary Diseases.—14 deaths; Rate 2·9.

Alcoholism. } Two cases. M., 56, (see Inquests);
Cirrhosis of Liver. } and M., 57.

Heart Diseases.—10 deaths, Rate 2·0.

Accidents.—One case; a child found dead in bed. (See Inquests.)

Anthrax.—Numerous cases have occurred during the year in the neighbourhood; one case was reported in the District, but afterwards believed to be a mistake; and one case was reported on a farm, some of whose land is in the District, but not the house or farm-buildings.

Hospitals for Infectious Diseases.—The tents purchased for the Small-pox Temporary Hospital remain stored in the wooden building erected at the time of the 1903 epidemic.

For general diseases the Northwich Joint Hospital Board is erecting a hospital within the Rural District. I gather from newspaper reports that its probable total cost will be £15,000 or £16,000; that Local Government Board sanction has been received to the borrowing of £13,885 for a period of 26 years; and that a tender of £6540 for buildings has been let.

New Sewage Disposal Works.—The Surveyor informs me “that a further scheme has been gone into during the year, and “is still under consideration.”

Public Water Supply.—The Surveyor informs me “that “active steps are now being taken by the Council to obtain a “new source of supply, and much work has been done during “the year with this object; and negotiations for the purchase “of a suitable source are now pending.” The actual supply has been gravely deficient in quantity throughout almost the whole year.

Dairies and Cowsheds. } These are under constant observa-
Bake-houses. } tion by the Inspector; and have
Slaughter-houses. } all been visited at least once by
 myself during the year. I have no special remarks on this
 occasion.

Unsound Meat.—It is commonly believed that meat of a questionable character is often “killed” and dressed in this District; and sent away for consumption. The nature of the

trade demands secrecy, and it is almost impossible to detect offenders.

Factories and Workshops.—A large part of the official Home Office Table is not required for this Report; and I have taken the liberty of condensing it (for economy in printing). The figures of inspections made will show that much work has been done. With regard to "Sanitary accommodations," the two defects not remedied are being attended to. The one Notice received from H.M. Inspector had reference to a "dangerous building." The Council has this under observation. There are no underground bake-houses, outworkers, or homework known. According to the promise made in my last Annual Report I have made about 40 inspections personally, and report that everything is fairly satisfactory. See Table 18.

The Public Health Acts Amendment Act, 1890, has been adopted; but no standard has to my knowledge been fixed by the Council relating to Section 22. The amount of accommodation enforced has been that which has seemed necessary in each case.

Public Scavenging.—In submitting the Inspector's figures (see Tables 19 and 20) I desire to record my appreciation of the work involved in preparing them; and as we now have the full information on record for 1903 and 1904, it may perhaps not be necessary in future to go into such great detail. By comparing the returns for the two years, we see that Cess-pools have diminished by 50; and zinc pails by 35; whilst peat-pails have increased by 76. The cess-pools remain the cheapest method of excrement-storage, because their capacity diminishes the number of visits; but that very same reason of course makes them the more objectionable to the Sanitarian. The cost of the zinc-pails is increased in proportion to their diminishing number; and the cost of the peat-pails diminished in proportion to their increasing number. The cost of the cess-pools has been diminished by more stringent oversight,

I omit, this year, the Table of ashes-tips, merely noting that 1299 loads were removed to one or other of nine recognised spots; (included in the list on page 148 of Annual Report 1903).

Sundry.—I omit also, though with regret, the street list of cases of infectious disease, (page 146 Annual Report 1903) on account of its increased bulk.

The other Tables furnished by the Inspector, (Tables 21 and 22) speak for themselves. He furnishes no general written report on this occasion, having made an exhaustive report last year (pages 144-5 Annual Report 1903).

His reports as Surveyor, and as Inspector of Canal Boats,

are appended, as usual; though not coming strictly in the department which I supervise.

Systematic Inspections.—These have been made in compliance with Art. 18 (3) of the Local Government Board's Order, and with the instructions of the Principal Medical Officer of the Local Government Board as further explained in his Memorandum. The results have been dealt with in preceding paragraphs.

T. W. H. GARSTANG,

D.P.H.

23rd January, 1905.



REPORT OF THE SURVEYOR.

Building Plans.—Eleven Sets of Building Plans have been approved by the Council during the year, viz.:—5 dwelling-houses, 1 chapel and schools, 1 shop and warehouse, 4 workshops and stores; total 11. Ten certificates of habitation for new dwelling-houses have been issued.

Roads.—The main roads and other roads are now in good order as to the macadam, but the surface drainage in parts is defective and requires attention. Surface drainage and side works are however gradually being carried out especially on the main roads and on other roads the whole of Finney's Lane has been drained and the macadam renewed and rolled, and a new footpath constructed at the Croxton Lane End.

A new footpath has been made, paved with 2-inch concrete flags, in front of property occupied by Mrs. Haddon and others in Chester Road and Croxton Lane.

A new pale fence has been erected in front of Mrs. Hancock's property in Sandbach Road.

A new 6-inch surface drain has been put in from Mr. Walmsley's to Mr. Elliott's in Chester Road and the surface levelled.

A new 4-inch granite cube crossing and channelling has been put in opposite the Golden Lion Inn, Chester Road.

Part of Queen Street has been reformed, ballasted, channelled, and macadamed, instead of being paved with grit sets.

Part of the footpath in Leadsmithy Street has been repaved.

The amount of macadam ($1\frac{1}{2}$ -inch and 2-inch) used is, on main roads 250 tons; other roads 270 tons; total, 520 tons.

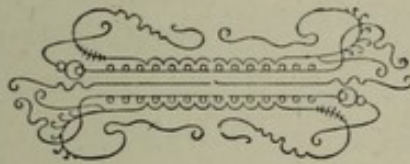
Great improvement has been made in facilities for watering the streets in dry weather in the erection of large tanks supplied by canal water in the Town's Yard and near Sutton Lane. In addition a brine supply is connected to the tank in the Town's Yard, by permission of Mr. Henry Seddon, who also gives the brine used for mixing with the water for street watering purposes.

The experiment of applying a weak solution of brine and water for allaying the dust on the macadamed roads has been successful, and has given great satisfaction generally.

Gas in Water Mains.—Serious trouble has been caused by the escape of gas from the gas mains, and although all hydrants have been overhauled, and all the valves cleaned and repaired, the trouble has not ceased, and representations have been made to the Gas Company thereon.

FRED W. STOCKS,

Surveyor.



CANAL BOATS.

Report for the year ending 31st December, 1904.

I beg to report that during the year 110 Canal Boats have been inspected with the following results :—

Satisfactory	...	...	...	...	...	94
Required Docking	...	...	...	...	...	3
Required Painting	...	...	...	...	...	4
Unregistered	...	...	...	...	...	0
Certificate not produced	...	...	...	...	...	1
Reported and Remedied	...	...	...	...	...	4
No Number on Boat	...	...	...	...	...	0
Cases of Infectious Disease	...	...	...	...	...	1
Fore Cabin not clean	...	...	...	...	...	3

Total	...	...	...	...	...	110

Otherwise the Sanitary Condition of the Boats inspected has been good, and in no case has over-crowding been detected.

FRED W. STOCKS.

Inspector.

Winsford Urban District.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1904.

Population at Census, 1891, 10,440.

„ „ „ 1901, 10,382.

Decrease, 58.

Estimated Population in middle of 1904, 10,365.

Area of District in Acres (exclusive of area covered by water) 5,780—100=5,680.

Total Population at all Ages, 10,382.

Number of Inhabited Houses, 2,167.

Average Number of Persons per House, 4·8.

} At Census of
1901.

Institutions within the District receiving sick and infirm persons from outside the District: Albert Infirmary, in Wharton. (Receives from Middlewich).

Institutions outside the District receiving sick and infirm persons from the District: Union Workhouse at Northwich.

Other Institutions, the deaths in which have been distributed among the several localities in the District: Nil.

Birth Rate per 1,000 living, 32·3.

Death Rate per 1,000 living, 15·6.

Death Rate from Seven Principal Zymotic Diseases, 1·6.

Deaths under one year in proportion to 1,000 Births, 134.

Hospital: Rilshaw Lane, Wharton.

Workhouse: In Northwich Urban District.

Each birth or death contributes to the Rate 0·09648.

TABLE 23.

(Local Government Board Table I.)

Vital Statistics of Whole District during 1904 and Previous Years.

Name of District, WINSFORD (URBAN).

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.	Under 1 Year.		At all Ages.					Number.	Rate.
				Number.	Rate per 1000 Births registered.	Number.	Rate.					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	10427	373	35·7	44	117	...	NO	RECORDS	...	...	151	14·5
1895	10421	408	39·1	68	166	215	...	...	...	...	219	21·0
1896	10414	383	36·7	51	130	155	...	...	...	3	158	15·1
1897	10407	358	34·4	67	184	177	...	...	...	2	178	17·1
1898	10400	352	33·7	52	148	157	...	..	...	5	161	15·5
1899	10394	341	32·8	42	123	167	...	...	...	...	164	15·8
1900	10388	345	33·2	46	133	162	...	...	...	4	165	15·9
1901	10382	324	31·2	29	89	132	...	1	...	...	132	12·7
1902	10375	316	30·4	40	127	146	...	1	...	...	145	13·9
1903	10370	335	32·3	40	119	135	...	4	1	6	139	13·4
Averages for years 1894-1903	10398	353	33·9	48	134	161	...	...	...	2	161	15·4
1904	10365	335	32·3	45	134	165	...	8	4	1	162	15·6

TABLE 24.—(Local Government Board Table II.)

Vital Statistics of separate Localities in 1904 and previous Years.

Name of District, WINSFORD (URBAN).

NAMES OF LOCALITIES.		1.—OVER.				2.—WHARTON.			
YEAR.		Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
		<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>
1894	...	6885	...	...	...	3542	...	...	...
1895	..	6910	..	...	...	3511	...	...	...
1896	...	6935	255	..	...	3479	128	..	...
1897	...	6960	236	113	41	3447	122	65	26
1898	...	6990	241	110	34	3410	111	51	18
1899	...	7015	227	96	30	3379	114	68	12
1900	...	7040	238	104	28	3348	107	61	18
1901	...	7063	228	89	21	3319	96	43	8
1902	...	7092	212	95	24	3283	104	50	16
1903	...	7110	239	96	28	3260	96	43	12
Averages of years 1894 to 1903.		7000	234	100	29	3398	110	54	16
1904	...	7125	219	107	29	3240	116	55	16

TABLE 25.—(Local Government Board Table III.)
Cases of Infectious Disease notified during the Year 1904.
Name of District, WINSFORD (URBAN).

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.		NO. OF CASES REMOVED TO HOSPITAL.		
	At all Ages.	At Ages—Years.					OVER.	WHARTON.	OVER.	WHARTON.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.					65 and upwards.
Small-pox ...	..	..	..	..	..	..	..	..	..	..	..
Cholera ...	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ...	1	1	..	..	..	..	1	..	..	..	..
Membranous Group	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ...	20	2	4	2	12	..	..	..	..	..	..
Scarlet Fever ...	20	6	12	2	..	..	9	..	..	..	..
Typhus Fever ...	..	..	..	..	..	..	9	..	..	..	..
Enteric Fever ...	2	..	1	..	..	..	2	..	..	..	3
Relapsing Fever ...	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ...	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ...	..	..	..	..	..	..	..	..	..	..	..
Plague ...	..	..	..	..	..	..	..	..	..	..	..
Totals ...	43	9	17	4	13	..	22	21	2	3	..

TABLE 26.

(Local Government Board Table IV.)

Causes of, and Ages at, Death during Year 1904.

Name of District, WINSFORD (URBAN).

CAUSES OF DEATH. I	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Re- sidents" belonging to Lo- calities, whether occurring in or beyond the District.		Total Deaths whether of Residents or non "Residents" in Public Institu- tions in the District. II
	2 All Ages.	3 Under 1.	4 1 and under 5.	5 5 and under 15.	6 15 and under 25.	7 25 and under 65.	8 65 and upwards.	9 OVER.	10 WHAR- TON.	
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	...	...	...	...	...	...
Scarlet Fever ... ..	...	...	...	...	...	...	...	...	...	...
Whooping-cough... ..	6	3	3	...	...	...	...	3	3	...
Diphtheria and Membran- ous Croup ... ..	...	...	...	...	...	...	...	...	...	...
Croup ... ..	...	...	...	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...	...	...
{ Enteric ... ..	...	...	...	...	...	...	...	...	...	...
{ Other continued... ..	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	4	...	...	...	...	3	1	3	1	...
Cholera ... ..	...	...	...	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...
Diarrhœa	11	4	6	...	...	...	1	7	4	...
Enteritis ... ..	...	...	...	...	...	...	...	...	...	...
Puerperal Fever ... ..	...	...	...	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases ... ..	...	...	...	...	...	...	...	...	...	...
Phthisis	4	...	...	...	...	4	...	4	...	...
Other Tubercular Diseases	2	1	...	1	...	...	...	1	1	...
Cancer, Malignant Disease	5	...	...	...	...	4	1	5	...	1
Bronchitis	20	7	2	1	2	3	5	9	11	1
Pneumonia	22	6	1	...	1	9	5	15	7	1
Pleurisy	2	...	...	...	...	2	...	1	1	...
Other Diseases of Respira- tory Organs ... ..	...	...	...	...	...	...	...	...	...	...
Alcoholism ... ..	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver }	2	...	...	...	...	2	...	1	1	1
Veneral Diseases ... ..	...	...	...	...	...	...	...	...	...	...
Premature Birth	11	11	...	...	...	...	...	6	5	...
Diseases and Accidents of Parturition	2	1	...	...	...	1	...	1	1	...
Heart Diseases	23	...	...	...	1	9	13	12	11	...
Accidents	5	...	1	...	...	2	2	4	1	1
Suicides	1	...	...	...	...	1	...	1	...	...
Debility, &c.	5	5	...	...	...	...	...	5	...	...
Convulsions, &c.	8	7	1	...	...	...	...	5	3	...
Old Age	13	...	...	...	...	1	12	11	2	...
Cerebral Diseases... ..	7	...	2	...	...	1	4	6	1	1
All other causes	9	...	...	...	...	3	6	7	2	2
All causes	162	45	16	2	4	45	50	107	55	8

TABLE 27.

Shewing Births, Birth-rate, Deaths, and General and Zymotic Death-rates, and compared with average of last 10 years; and Deaths in Old Age and Infancy, and percentage of these to Total Deaths; for the Year 1904.

TOTAL.			BIRTH RATE.		DEATH RATE.				DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.	
Births.	Deaths	Zymotic Deaths.	Average.	1904.	General.		Zymotic.		At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.
					Average.	1904.	Average.	1904.				
335	162	17	33.9	32.3	15.4	15.6	2.0	1.6	50	45	31	28

TABLE 28.

Shewing Deaths, Death-rates, Deaths from Special Diseases, and Old Age and Infantile Deaths, in the Four Quarters of the Year, 1904.

QUARTER ENDING.	Total Deaths.	Rate.	DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.		Whooping Cough.	Diarrhoea.	ZYMOTIC DEATHS.		Phthisis.
			At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.			Total.	Rate.	
March 31	45	17.4	15	10	33	22	2	2	4	1.5	1
June 30	42	16.3	11	13	26	31	3	1	4	1.5	2
Sept. 30	27	10.4	10	9	37	33	1	5	6	2.3	1
Dec. 31	48	18.4	14	13	29	27	0	3	3	1.1	0
Total	162	15.6	50	45	31	28	6	11	17	1.6	4

TABLE 29.

Births.

OVER.							
	M.	F.	Total.	Rate.	Of which Illegitimate.		
					M.	F.	Total.
1st Quarter	32	25	57	32·2	0	1	1
2nd „	32	24	56	31·6	4	3	7
3rd „	21	29	50	28·2	0	1	1
4th „	31	25	56	31·3	1	3	4
Total	116	103	219	30·7	5	8	13
WHARTON.							
1st Quarter	17	13	30	37·2	1	1	2
2nd „	19	16	35	43·5	1	1	2
3rd „	13	16	29	35·6	1	2	3
4th „	12	10	22	27·0	0	0	0
Total	61	55	116	35·8	3	4	7
Winsford Total	177	158	335	32·3	8	12	20

TABLE 30.

Shewing position of Winsford in the County in 1903, compared with 34 other Urban Districts.

	Best of 35 Urban Districts	Worst of 35 Urban Districts	Wins- ford Figures.	Place of Wins- ford in the List.
Birth Rate	38·8	13·6	32·3	6
Death Rate	6·6	19·2	13·4	24
Zymotic Death Rate	0·0	2·8	0·8	16
Infantile Mortality	25	200	119	22

TABLE 31.

Notifications of Infectious Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	TOTAL.
1890	—	23	9	3	6	1	42
1891	—	5	1	5	2	2	15
1892	—	14	12	—	17	—	43
1893	3	222	3	3	32	6	269
1894	—	11	—	3	7	2	23
1895	—	31	—	2	9	4	46
1896	—	173	4	1	17	2	197
1897	—	25	2	1	19	—	47
1898	—	11	2	1	7	1	22
1899	—	18	2	1	17	1	39
1900	—	114	6	4	21	2	147
1901	—	65	2	5	18	3	93
1902	—	20	8	1	12	3	44
1903	1	4	2	—	12	4	23
Total of 14 years.	4	736	53	30	196	31	1050
Average of 14 years	0·3	53	4	2	14	2	75
1904	—	20	1	2	20	—	43

TABLE 32.

Deaths from Zymotic Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping- cough.	Diarrhoea.	Puerperal Fever.	Erysipelas.	TOTAL.
1890	—	3	6	1	1	1	4	—	—	16
1891	—	—	2	—	—	13	7	—	1	23
1892	—	1	5	—	5	—	3	—	1	15
1893	1	7	1	—	—	—	11	3	1	24
1894	—	1	—	1	3	12	2	—	—	19
1895	—	3	—	—	9	1	17	5	—	35
1896	—	7	3	1	3	—	5	—	—	19
1897	—	—	—	—	1	33	11	—	—	45
1898	—	2	1	—	—	—	18	—	—	21
1899	—	1	—	—	7	3	6	1	1	19
1900	—	15	2	—	—	3	6	—	—	26
1901	—	2	1	2	—	1	4	—	2	12
1902	—	—	4	1	6	5	4	—	—	20
1903	—	—	—	—	—	1	8	1	—	10
Total of 14 years	1	42	25	6	35	73	106	10	6	304
Average of 14 Years	0·07	3·0	1·8	0·4	2·5	5·2	7·6	0·7	0·4	21·7
1904	—	—	—	—	—	6	11	—	—	17

TABLE 33.

Vaccination.

Year.	Number of Births Registered.	Successfully Vaccinated.	Insusceptible.	Had Small-pox.	Dead. Unvaccinated.	Postponed on Medical Certificate.	Removed, and Traced.	Removed, and Lost.	Conscientious Objections.	Unaccounted for.
1896	472	422	1	—	41	6	—	2	—	—
1897	450	398	—	—	49	2	—	—	—	1
1898	428	379	—	—	43	2	1	—	2	1
1899	421	385	—	—	32	1	2	—	1	—
1900	428	374	—	—	37	13	1	1	2	—
1901	393	361	—	—	22	7	—	1	2	—
1902	404	374	1	—	24	3	—	—	2	—
Total in 7 years	2996	2693	2	—	248	34	4	4	9	2
1903	403	350	—	—	42	4	2	—	5	—

TABLE 34.

Home Office Table.—Annual Report of Medical Officer of Health for 1904, for the Urban District of Winsford. Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories (Including Factory Laundries.)	160	...	...
Workshops (Including Workshop Laundries.)	618	...	...
Workplaces	4	...	...
Homeworkers' Premises	48	...	...
Total	830	...	...

3.—OTHER MATTERS.

Class.	Number.
Underground Bakehouses :—	
In use during 1903... ..	2
Certificates granted in 1904	2
In use at the end of 1904	2

	Number of Lists.	Number of Outworkers.
Homework :—		
Lists received	1	12

Workshops on the Register at the end of 1904:

Bakehouses	29
Laundries	2
Workshops	99
Workplace	1
Domestic Workshops... ..	12

Total number of Workshops on Register 143

Besides Factories 32

TABLE 35.

Summary of Sanitary Work done in the Nuisance Inspector's Department during the year 1904, in the Urban District of Winsford.

							Inspections and Observations made.	Formal Notices by Authority.	Nuisances abated after Notice.
Dwelling- Houses and Schools.	{	Foul Conditions ... ..	...	...	...	...	...	...	...
		Structural Defects ... ..	...	...	...	...	...	...	...
		Overcrowding ... ..	...	...	...	...	50	2	2
		Unfit for Habitation ... ..	...	...	...	...	...	...	...
		Lodging Houses ... ..	...	...	...	...	18	...	...
		Dairies and Milkshops ... ..	...	...	...	...	144	...	...
		Cowsheds ... ..	...	...	...	...	240	...	...
		Bakehouses... ..	...	...	...	...	240	2	2
		Slaughterhouses ... ..	...	...	...	...	168	3	3
		Canal Boats ... ..	...	...	...	...	10	...	...
		Ashpits and Privies ... ..	...	...	...	...	200	16	16
		Deposits of Refuse and Manure ... ..	...	...	...	...	64	...	...
House Drainage.	{	Water Closets ... ..	...	...	...	...	50	...	...
		Defective Traps ... ..	...	...	...	...	10	...	...
		No Disconnection .. ..	...	...	...	...	...	...	...
		Other Faults ... ..	...	...	...	...	...	...	...
		Water Supply ... ..	...	...	...	...	...	...	...
		Pigsties .. ..	...	...	...	...	30	3	3
		Animals improperly kept ... ..	...	...	...	...	...	...	...
		Offensive Trades .. ..	...	...	...	...	...	...	...
Smoke Nuisances ... ..	...	...	...	...	...	...	...
Other Nuisances ... ..	...	...	...	...	6	6	6		
TOTALS							1230	32	32
Nos.									
<i>Precautions against Infectious Disease.</i>									
Houses Disinfected after Infectious Disease ... ..							...	...	24
Schools Disinfected after Infectious Disease ... ..							...	...	8

WINSFORD URBAN DISTRICT.

Note.—The matter found on pages 3 and 4, and 7 to 20 inclusive, is to be considered an integral part of this Report.

Area.—Unchanged. (See Annual Report 1903, page 30).

Population.—This is believed to be still practically stationary; and my estimate is purely arithmetical. (See page 8).

Tables.—See paragraph on page 7. The “average” birth-rate changes from 34·6 to 33·9; and the “average” death-rate from 15·9 to 15·4. The “average” infant mortality figure changes from 138 to 134; and the “average” zymotic death-rate from 2·1 to 2·0. These are all signs of a slight improvement; and the figures for 1904 approximate very closely to the averages.

Births.—Table 29, which is presented in a more complete form than heretofore, gives the details for the year. The number of births is the same as the previous year, and below the average; the Rate is the same as the previous year, and 1·6 below the average. The average itself will probably continue to decrease slightly. A stationary population due to and accompanied by slackness of trade is the probable explanation. The Winsford Rate is 32·3, that for the whole of England and Wales for 1904 is 27·9.

Illegitimate Infants.—The number of illegitimate births is the same as the previous year, 20; or 6 per cent. of all births. There have been 4 deaths of illegitimate children in the first year of life, or 20 per cent.; whilst 41 deaths among 315 legitimate births is 13 per cent.

Deaths.—(See Tables 23, 26, 27, and 28). The number actually registered was 165, of which 1 belonged each to Middlewich, Church Minshull, Ashton-on-Mersey, and Marton; but on the other hand the number to be dealt with is increased by 1 which occurred in the Workhouse at Northwich; leaving a net number of 162, and a Rate of 15·6. This is only 0·2 below the average, and must be regarded as satisfactory; as it

represents a year which I anticipate will be found in many Districts to be considerably worse than the average. The principal factor is deaths from respiratory diseases, followed by deaths from heart disease, and deaths in infancy and old age.

The seasonal distribution of the deaths and the gradual building up of the Rate, are shown thus :—

	No. of deaths.		Actual Rate.	
January	...	16	...	1.54368
February	...	11	...	1.06128
March	...	18	...	1.73666
April	...	15	...	1.44720
May	...	15	...	1.44720
June	...	12	...	1.15776
July	...	14	...	1.35072
August	...	7	...	0.67536
September	...	6	...	0.57888
October	...	15	...	1.44720
November	...	20	...	1.92960
December	...	13	...	1.25424
		—		—
Total	...	162	...	15.62978
		—		—

The death-rate for England and Wales for 1904 is 16.2.

Uncertified Deaths.—None.

Coroner's Inquests.—These were held in 8 cases. The following belong to Over :—April 11th, M., 57 years, found drowned in a pond ; June 15th, F., 72 years, cerebral hæmorrhage and injuries from a fall in the street ; July 28th, F., 4 years, run over by a cart ; August 23rd, F., 2 years, exhaustion after diarrhœa ; November 28th, M., 36 years, drowned by accidentally falling into the river at night ; December 27th, M., 50 years, suicide by taking prussic acid. The following belong to Wharton :—February 11th, F., 72 years, shock from burns from clothing catching fire ; March 7th, M., 67 years, heart disease.

Comparative Position.—(Table 30). The position of Winsford in 1903, as compared with other Urban Districts was slightly better than in 1902 ; being about 15th in a list of 35. Beginning with 1899 the position has been 15th, 18th, 8th, 20th, and now 15th. We may fairly consider the District therefore to occupy a middle, or average, place ; which affords no room for adverse criticism, even if there be nothing to boast about. 1904 will possibly lose a place or two ; unless other Districts have found it, as we have done, a year of figures rather worse than the average.

Infantile Mortality.—(Table 23). 45 deaths of infants, compared with 335 births, is as 134 to 1000. This is the highest figure in the Table save three; but it is due partly to the smaller number of births, as well as partly to the number of actual infantile deaths. Table 26 shows that 17 of these deaths, due to prematurity and general debility, were unavoidable; but that the other 28, or the majority of them, were due to causes which ought to be under control, and were “unnecessary.” 12 more deaths between the ages of 1 and 5 are in the same list; and if only one-half of these 40 children had been saved, the general death-rate would have been only 13·6; and the infantile mortality figure only 92. These figures clearly show the importance of strenuously persisting with all measures directed to the preservation of **infantile** life. (See page 17).

Mortality among Old People.—50 deaths, or 31 per cent. of all deaths. The proportion is higher than in the two previous years; and as this is the one class of all, in which we cannot expect to reduce mortality, a high percentage is really a sign of average long life.

Notifications of Infectious Diseases.—(Tables 25 and 31). 43 cases were notified. 20 of them however were only erysipelas. Every year there seems to be a larger proportionate number of cases of erysipelas in Winsford than in any other of my Districts; a fact which I am unable to explain. Of the remaining 23, there was 1 case of diphtheria in October; a striking contrast to the condition of Middlewich, the nearest neighbour; 2 cases of enteric fever, January and July; and 20 cases of scarlet fever, 11 in Over and 9 in Wharton, spread over the whole year. The total number of cases is little more than half the average; and there was not a single fatal result among them.

Deaths from Zymotic Diseases.—(Table 32). The total number was 17; Rate 1·64. The number and Rate are slightly below the average. The deaths were 6 from whooping-cough, and 11 from diarrhœa; two diseases which are difficult to control. 16 deaths occurred in children under 5 years of age (see “Infantile Mortality” above); and 1 (diarrhœa) in a woman of 77 years. No less than 7 of the diarrhœa deaths occurred in months which are not usually associated with true epidemic diarrhœa; but I can only classify them as certified.

Small-pox.—Absent.

Vaccinations.—By the courtesy of Mr. Pimlott I am enabled to present Table 33; which gives the statistics for the Over Sub-District of the Northwich Union, of which the town of Winsford forms more than three-fourths. In 1903 350 children were vaccinated, out of 361 surviving; or 97 per cent. If we

include those temporarily postponed the percentage is nearly 99. Practically the same results have been obtained over the whole 8 years for which I have got out the figures; and the District again ranks as the best vaccinated of all with which I am acquainted.

Measles.—For the second year in succession, no deaths are recorded. This is the more remarkable, as there has been at least one serious epidemic. The disease has been very prevalent during the year in the surrounding parts of the Rural District. But it was not until November 16th that the first case was heard of, at Meadow Bank. This village is on the banks of the river, which is the boundary, immediately opposite to Moulton, in the Rural District, where measles was prevalent. There is a good deal of inter-communication between the two places, particularly by girls from Moulton coming over to work in the Salt Works at Meadow Bank. I visited the village and the works the same day and took all possible precautions; but I was “just too late” (as so often happens with measles), and within a very few days a large number of cases appeared. Throughout December Mr. W. Blagg acted as Special Inspector; and reported nearly 200 cases. The schools were closed, and all infected families were isolated in their own respective premises, as far as could be persuasively enforced by the Inspector who visited every house every day, and many twice in a day. Owing to this action, as I honestly believe, and to the absence of exposure to chill, (necessitated by the children being kept indoors), the epidemic burned itself out by the end of the year without the loss of a single life; and remaining confined to Meadow Bank; except for some half-dozen scattered cases, which occurred in December in the town of Winsford, on both sides of the river, but fortunately these did not spread. (See page 15.)

Scarlet Fever.—There were 20 cases without deaths. Three children, from one house, were treated in Hospital, between June 29th and August 11th; and two other cases from August 11th to September 14th. One or two of the cases were only notified when in a peeling condition; so that there would appear to have been plenty of opportunity to start an epidemic; which however did not “come off.” In 1893, 1896, and 1900, we had 222, 173, and 114 cases respectively; and all the intervening years had cases, more or less, from 4 to 65; yet only in the three years named was there exceptional liability to infection, as shown by Table 31. Whether there is more infectiveness about the fever in some years than in others, it would perhaps be unwise to assert; but it seems to be the only explanation; for susceptible material is always present, though of course not in so great proportion in the year following an epidemic.

Whooping-cough.—Six deaths are attributed to this cause, all children under 5 years of age, 3 in Over and 3 in Wharton. March and April were the dates in Wharton; May, June, and September in Over; which distinctly points, on paper at all events, to a slow passage of an epidemic from one end of the District to the other. The Infants' School in High Street (Over) reported 60 children absent (including contacts), besides 8 due to chicken-pox, on May 10th; and the school was closed for a time. This is a disease which it is almost impossible to control, as many parents have a mistaken idea of the curative effect of "fresh air"; and deliberately send their children out of doors whilst in an infectious condition, and so spread the disease.

Diphtheria.—Only one case notified, in October; no deaths.

Enteric Fever—Two cases; January and July; no deaths. The former was examined bacteriologically, with negative result.

Epidemic Influenza.—Four deaths; in January, May, and July; 3 males, 1 female; at ages 49, 61, 62, and 65.

Diarrhœa.—Eleven deaths, 4 being children under 1 year, 6 between 1 and 5 years, and 1 a woman of 77. Only 3 of the deaths occurred in August, and 1 in July; the remainder being in January, March, May, November, and December, months in which we do not expect true epidemic diarrhœa. (See page 16).

Puerperal Fever.—Absent.

The Midwives' Act, 1902.—See page 18.

Erysipelas.—20 cases; no deaths.

Phthisis.—4 deaths; Rate 0·4. Ages 25, 28, 28, and 42. The numbers in the three preceding years were 9, 6, and 8.

Notifications of Phthisis.—Four cases were notified in 1904; of which at least 1 is dead. There have been 30 cases notified in the four years, (this is the only District where voluntary notification has been at all a success; see page 10), of which not more than 4 survive. As only 27 deaths occurred in the same time, (see last paragraph), a fair proportion of existing cases would appear to have been notified.

Other Tubercular Diseases.—2 deaths; both ascribed to meningitis, both males, ages 5 months, and 8 years.

Cancer.—5 deaths, at ages 46, 53, 60, 63, and 72; all in Over. 3 females, 2 males. Organs affected: liver (2), lung, mouth, uterus.

Respiratory Diseases.—44 deaths. Rate 4·2. More than

double the number and Rate of 1903 ; and by far the largest contributor to the total death-rate.

Alcoholism.—Two deaths ; both females ; 47 and 59 years of age.

Diseases and Accidents of Parturition.—Two deaths ; F., 38 years, apoplexy ; M., 1 hour, difficult birth.

Heart Diseases.—23 deaths ; Rate 2·2.

Accidents.—Five. } See “Coroner’s Inquests.”

Suicide.—One. }

School Closure.—High Street Infant School for whooping-cough ; Meadow Bank and Whitegate for measles ; all closed voluntarily by the managers ; which renders Special Reports unnecessary.

Isolation Hospital.—See “Scarlet Fever” above ; and “Hospital” paragraph in previous Report, page 39.

Disinfection.—As before. (See pages 11 and 18).

Systematic Inspections.—With the assistance of Mr. Oakes, (whose knowledge of the District can be equalled by few, and surpassed by none), these are made from time to time throughout the year. Schools, common lodging-houses, bake-houses, slaughter-houses, cow-sheds, sewage-works, factories and workshops, are all visited indiscriminately as they happen to be met with on these journies of systematic inspection, which are quite independent of numerous journies made for specific investigations.

Abatement of Nuisances.—Table 35 will show that a very close supervision is exercised over all conditions likely to cause nuisances ; and that formal notices are issued and enforced when needful ; the comparatively small number of such notices must be considered in connection with the much larger number of cases where nuisances (mostly small matters) are promptly remedied at the Inspector’s request, without formal notice. 10 defective drain-traps have been replaced by new ones. 3 pigsties without drains were found during inspections ; notices were served, and the nuisances abated.

Ashpits, Middens, &c.—Ashpits are emptied monthly ; privy-middens three times a year. Deposits of refuse and manure are cleared away every month, to a place provided for the purpose by the Council.

Peat-pails.—The number in use has now increased to 258, an increase of 68 during the year. The steady increase is evidence of the strongest kind that they are found satisfactory.

Of course, like any other convenience, they can be made of no effect by misuse; but if a tenant be moderately and reasonably intelligent, and cleanly, the result is satisfactory alike to tenant, owner, and Sanitary Authority.

Sewering and Sewage Treatment.—The sewers are in the Surveyor's department, from which I have no report. The filter-beds continue to deal effectively with the sewage.

Overcrowding.—In consequence of suspicion of the existence of overcrowding, I personally visited, with the Inspector, nearly all the houses in the town which had not more than two bedrooms. Only two cases were discovered; and these have been remedied. This result was better than I expected.

Schools.—All the Schools in the District now have either water-closets or peat-pails, in place of privies. Each school has been disinfected twice during the year.

Factories and Workshops.—Only one clothing factory is in work at present. Two fustian factories out of four are idle. Not more than one-half of the salt-works are in work. There is thus an entire absence of pressure; and there is really very little scope for the application of the Act. All salt-works and factories have been inspected once by myself, and four times by Mr. Oakes. Small improvements have been carried out, where previously suggested, and there is now a generally satisfactory condition. Workshops have been inspected according to their importance. There are few of any great importance, except bake-houses and such-like, and these are frequently inspected. The Council has issued two licenses to underground bake-houses. The Public Health Acts Amendment Act has been adopted; but no standard of sanitary accommodation has been laid down.

Common Lodging-houses.—There are three such, and each has been inspected six times, and found satisfactory.

Water Supply.—This is exceptionally good, both in quantity and quality.

Dairies, Cowsheds, and Milk-shops.—The milk-shops have been inspected every month, and found satisfactory. The majority of cowsheds have been inspected quarterly, and no special complaints made. The usual notices about lime-washing were sent to all cow-keepers in April and September.

Slaughter-houses.—Inspected monthly. Three lime-washing notices served, and attended to.

Canal Boats.—The Inspector states that 10 boats have been inspected, and found in good order.

T. W. H. GARSTANG,

D.P.H.

30th January, 1905.



Bucklow Rural District.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1904.

Population at Census, 1891, 20,382.

„ „ „ 1901, 19,850. (N.B.—Area diminished).

Estimated Population in middle of 1904, 20,700.

Area of District in Acres (exclusive of area covered by water) 57,642—544=57,098.

Number of Inhabited Houses, 4,115. } At Census of
Average Number of Persons per House, 4·8. } 1901.

Institutions within the District receiving sick and infirm persons from outside the District: St. Anne's Home, Dunham Massey, (Manchester Consumption Hospital). Baguley Sanatorium for General Infectious Diseases, (Manchester Corporation). Baguley Temporary Small-pox Hospital, (Bucklow Joint Hospital Board).

Institutions outside the District receiving sick and infirm persons from the District: Union Workhouse, Knutsford. General Hospital, Altrincham. Manchester Royal Infirmary. Stockport Infirmary.

Other Institutions, the deaths in which have been distributed among the several localities in the District: Nil.

Birth Rate per 1,000 living, 21·9.

Death Rate per 1,000 living, 11·6.

Death Rate from Seven Principal Zymotic Diseases, 1·0.

Deaths under one year in proportion to 1,000 Births, 86.

Hospital. }
Workhouse. } See above.

Each birth or death contributes to the Rate 0·04831.

TABLE 36.

(Local Government Board Table I.)

Vital Statistics of Whole District during 1904 and Previous Years.

Name of District, BUCKLOW (RURAL).

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.	Under 1 Year.		At all Ages.					Number.	Rate.
				Number.	Rate per 1000 Births registered.	Number.	Rate.					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	31300	717	22·8	86	119	...	...	46	...	...	438	13·2
1895	21142	496	23·5	66	133	330	...	...	...	...	318	15·0
1896	21527	506	23·4	49	100	283	...	...	...	...	293	13·6
1897	22007	509	23·1	60	120	305	...	...	...	...	298	13·5
1898	22722	541	23·8	54	100	273	...	..	...	...	267	11·8
1899	23359	535	22·9	69	129	336	...	...	...	...	333	14·3
1900	19473	425	21·8	61	143	270	...	...	...	...	289	14·8
1901	19850	435	21·9	56	129	260	...	5	..	...	278	14·0
1902	20105	440	21·9	32	73	228	...	7	7	22	235	11·7
1903	20416	475	23·3	54	114	272	...	25	19	20	273	13·4
Averages for years 1894-1903	22190	507	22·8	59	116	284	...	21	13	21	302	13·5
1904	20700	455	21·9	39	86	262	...	18	16	18	242	11·6

TABLE 37.—(Local Government Board Table II.)

Vital Statistics of separate Localities in 1904 and previous Years.

Name of District, BUCKLOW (RURAL).

NAMES OF LOCALITIES.	1.—ALTRINCHAM.				2.—LYMM.				3.—KNUTSFORD.				4.—WILMSLOW.				5.—SALE.			
	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
1894	14125	326	181	46	3702	74	39	4	8604	208	157	25	4869	109	61	11	...	...	...	...
1895	9461	230	136	31	3452	76	36	9	3651	86	51	7	4578	104	95	19	...	...	...	...
1896	9985	225	123	18	3150	76	43	5	3584	90	48	12	4808	115	79	14	...	...	...	...
1897	10375	230	147	45	3167	85	45	12	3602	79	44	26	4863	115	62	21	...	...	...	...
1898	10800	233	115	24	3338	80	35	8	3653	99	39	8	4931	129	78	14	...	...	...	...
1899	11267	269	155	33	3338	69	41	8	3653	81	52	13	5101	116	85	15	...	...	...	...
1900	7263	157	101	22	3350	66	56	10	3660	80	49	11	5200	122	83	18	...	...	...	...
1901	7608	161	105	26	3236	82	49	7	3635	75	42	11	5371	117	82	12	...	...	...	...
1902	7798	170	89	9	3217	69	41	5	3632	86	41	8	5458	115	64	10	...	...	...	...
1903	7116	173	98	25	2692	71	31	6	3630	70	44	4	3416	65	39	7	3562	96	61	12
Averages of years 1894 to 1903.	9580	217	125	28	3264	75	42	7	4130	95	57	12	4860	111	73	14	3562	96	61	12
1904	7260	163	88	17	2670	63	31	2	3625	74	39	2	3500	61	36	5	3645	94	48	13

TABLE 38.—(Local Government Board Table III.)

Cases of Infectious Disease notified during the Year 1904.

Name of District, BUCKLOW (RURAL).

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.					NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.				
	At all Ages.	At Ages—Years.					Altrincham, 1	Lymm, 2	Knutsford, 3	Wilmslow, 4	Sale, 5	Altrincham, 1	Lymm, 2	Knutsford, 3	Wilmslow, 4	Sale, 5
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.											65 and upwards.
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria ...	27	12	9	2	4	20	4	2	1	...	11	...	1	...	...	...
Membranous Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	6	...	1	1	2	2	1	...	2	1	...	...	...	...	...	...
Scarlet Fever	79	14	47	10	8	36	14	1	19	9	27	1	1	15	6	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	...	...	2	...	1	...	...	1	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	3	...	...	1	2	...	1	...	2	...	...	...	...	...	...	...
Plague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	117	26	57	14	18	58	21	3	24	11	38	1	2	16	6	...

TABLE 39.

(Local Government Board Table IV.)

Causes of, and Ages at, Death during Year 1904.

Name of District, BUCKLOW (RURAL).

CAUSES OF DEATH. I	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Re- sidents" belonging to Lo- calities, whether occurring in or beyond the District.					Total Deaths whether of "Residents" or non "Residents" in Public Institu- tions in the District. 14
	2 All Ages.	3 Under 1.	4 1 and under 5.	5 5 and under 15.	6 15 and under 25.	7 25 and under 65.	8 65 and upwards.	9 ALTRIN- CHAM.	10 LYMM.	11 KNUTS- FORD.	12 WILM- SLOW.	13 SALE.	
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	2
Measles	1	...	1	...	...	...	...	...	...	1	...	...	...
Scarlet Fever	2	...	...	2	...	...	...	...	1	...	1	...	7
Whooping-cough... ..	7	3	3	1	...	...	...	2	1	...	2	2	...
Diphtheria and Membran- ous Croup	2	...	2	...	...	...	...	2	...	...	...	...	2
Croup ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
{ Enteric	1	...	...	...	...	1	...	...	...	...	...	1	2
{ Other continued... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	7	...	...	...	1	4	2	4	1	...	2	...	...
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea	8	7	...	...	...	...	1	3	...	...	1	4	...
Enteritis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	1	...	...	...	...	1	...	...	...	...	1	...	...
Erysipelas	1	..	...	...	...	...	1	...	...	...	1	...	...
Other Septic Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	17	...	...	1	2	12	2	8	1	3	2	3	1
Other Tubercular Diseases	9	2	4	1	...	1	1	3	1	3	2	...	...
Cancer, Malignant Disease	12	...	...	1	1	5	5	6	3	2	...	1	...
Bronchitis	15	3	..	...	...	3	9	4	2	4	1	4	...
Pneumonia	22	5	4	1	1	7	4	3	4	3	3	9	...
Pleurisy	1	...	...	...	1	...	...	...	...	1	...	...	...
Other Diseases of Respira- tory Organs	2	...	2	...	...	...	...	1	1	...	...	...	...
Alcoholism ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver }	2	...	...	...	...	1	1	...	...	1	...	1	...
Venereal Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	3	3	...	..	...	...	...	1	...	...	...	2	...
Diseases and Accidents of Parturition	1	...	..	...	...	1	...	...	...	...	...	1	...
Heart Diseases	30	...	...	1	1	15	13	12	2	6	5	5	...
Accidents	9	...	1	...	1	7	..	3	2	2	1	1	...
Suicides	3	...	...	...	...	3	...	1	1	1	...	...	...
Debility, &c.	8	8	...	...	...	...	...	5	...	...	2	1	...
Convulsions, &c.	7	6	1	...	...	...	...	4	...	...	2	1	...
Old Age	21	...	...	...	...	..	21	8	1	5	4	3	...
Cerebral Diseases... ..	20	1	...	...	...	8	11	5	5	3	3	4	...
Acute Rheumatism	1	...	...	...	...	1	...	1	...	...	...	...	...
All other causes	29	1	...	2	2	12	12	12	5	4	3	5	...
All causes	242	39	18	10	10	82	83	88	31	39	36	48	14

TABLE 40.

Causes of Death of Infants.

RURAL PART OF SUB-DISTRICT OF	Prematurity, Debility, and Malformation.	Convulsions.	Zymotic Diseases.	Bronchitis and Pneumonia, &c.	Miscellaneous.	Total.
Altrincham ...	6	4	2	3	2	17
Lymm ...	0	0	1	1	0	2
Knutsford ...	0	0	0	1	1	2
Wilmslow ...	2	1	2	0	0	5
Sale ...	3	1	5	3	1	13
Total ...	11	6	10	8	4	39

TABLE 41.

Illegitimate Infants.

RURAL PART OF SUB-DISTRICT OF	Legitimate.		Illegitimate.		Percentage of Deaths under 1 Year to Births.	
	Births.	Deaths under 1 Year.	Births.	Deaths under 1 Year.	Legitimate.	Illegitimate.
Altrincham .	160	14	3	3	8·8	100·0
Lymm	61	2	2	0	3·3	0·0
Knutsford ...	71	2	3	0	2·8	0·0
Wilmslow ...	60	5	1	0	8·3	0·0
Sale ...	89	11	5	2	12·3	40·0
Total ...	441	34	14	5	7·7	35·7

TABLE 42.

Coroner's Inquests.

DATE.	SEX	AGE	WHERE HELD.	WHERE BELONGED TO	VERDICT
NON-RESIDENTS.					
Feb. 24	M	30	Dunham Massey	Unknown	Found drowned in canal. Phthisis with hæmorrhage Suicide by drowning in river, whilst of un- sound mind.
Dec. 4	M	21	Millington	Glasgow	
May 28	M	24	Northenden	Hulme	
Dec. 16	M	53	Tabley Inferior	Lostock Gralam	Fractured skull, fall from threshing-machine.
RESIDENTS.					
Feb. 17	F	33	Altrincham	Timperley	Fractured skull, fall from train.
Mar. 15	F	31	Ashley	Ashley	Found dead in bed. Epileptic fit.
Mar. 29	M	1 min.	Dunham Massey	Dunham Massey	Asphyxia.
Apr. 23	M	45	Altrincham	Timperley	Suicide; cut throat.
June 23	F	16	Altrincham	Timperley	Shock from burns.
Oct. 25	M	72	Timperley	Timperley	Cerebral hæmorrhage.
Oct. 30	F	2	Dunham Massey	Dunham Massey	Accidentally scalded.
Dec. 19	F	59	Timperley	Timperley	Heart disease.
Apr. 21	M	35	Millington	Millington	Fractured skull, from kick by horse.
July 11	M	60	Agden	Agden	Suicide by drowning in canal, whilst tem- porarily insane.
Nov. 21	M	33	High Legh	High Legh	Accidentally burnt in a hay loft.
Sep. 28	M	40	Knutsford	Ollerton	Shock from burns re- ceived at a farm fire.
Mar. 20	M	36	Northern Etchells	Northern Etchells	Tetanus following acci- dental injury to head.
June 8, 03	M	31	Stockport	Northenden	Run over by goods train.

TABLE 43.

Notifications of Infectious Diseases.

Year.	Small-pox.	Scarlatina.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Cholera.	Erysipelas.	TOTAL.
1890	—	26	5	5	1	—	2	39
1891	—	28	5	7	—	—	8	48
1892	—	68	8	18	2	—	11	107
1893	—	193	18	14	1	—	14	240
1894	1	116	40	7	2	—	16	182
1895	2	39	19	11	3	—	5	79
1896	—	31	9	19	1	—	5	65
1897	—	42	3	8	—	—	6	59
1898	—	19	11	6	—	1	9	46
1899	—	83	6	7	2	—	8	106
1900	—	79	8	6	—	—	3	96
1901	—	120	23	6	—	—	9	158
1902	—	46	37	6	4	—	9	102
1903	6	52	25	7	—	—	7	97
Total of 14 years.	9	942	217	127	16	1	112	1424
Average of 14 years	0·6	67	15	9	1	0·07	8	102
1904	—	79	27	2	3	—	6	117

TABLE 44.

Deaths from Zymotic Diseases.

Year.	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Diarrhoea.	TOTAL.
1890	—	5	1	—	3	3	8	20
1891	—	1	1	1	5	4	6	18
1892	—	13	3	1	7	3	6	33
1893	2	3	6	6	1	7	18	43
1894	—	1	4	5	8	1	5	24
1895	1	—	2	5	3	4	2	17
1896	—	1	—	6	3	3	4	17
1897	—	16	1	2	1	3	15	38
1898	—	3	1	2	—	2	11	19
1899	—	—	3	1	7	3	16	30
1900	—	—	1	1	8	1	7	18
1901	—	1	2	5	8	2	10	28
1902	—	1	2	7	1	—	1	12
1903	2	2	4	7	6	1	8	30
Total of 14 years	5	47	31	49	61	37	117	347
Average of 14 Years	0.36	3.35	2.21	3.50	4.36	2.63	8.39	24.80
1904	—	1	2	2	7	1	8	21

TABLE 45.
Vaccination, 1903.

	Births.	Successfully Vaccinated.	Insusceptible.	Had Small-pox.	Died Unvaccinated.	Postponed on Certificate.	Removed and Traced.	Lost.	Number Remaining.	Conscientious Objections.
Altrincham ..	537	486	3	—	34	5	4	1	1	3
" 	394	337	5	—	38	4	3	3	1	3
Lymm ..	83	78	—	—	4	1	—	—	—	—
" 	94	81	—	—	7	4	—	1	—	1
Knutsford ..	111	102	—	—	8	—	—	—	—	1
" 	105	95	—	—	8	1	—	1	—	—
Wilmslow ..	158	137	1	—	12	5	—	1	—	2
" 	103	90	—	—	8	5	—	—	—	—
Sale ..	148	132	1	—	9	1	3	—	—	2
" 	292	255	2	—	24	7	2	2	—	—
Totals ..	2025	1793	12	—	152	33	12	9	2	12
1896 to 1902 inclusive	13131	11107	128	—	1169	425	60	137	8	57
Grand Totals ..	15156	12900	140	—	1321	458	72	146	10	109

TABLE 46.

Cases of Infectious Diseases notified, 1904, arranged according to Localities.

	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Total.		Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Total.
Ashley	...	1	...	...	...	...	1	Agden	...	...	...	...	...	...	...
Dunham Massey	...	21	12	...	...	...	33	Aston-by-Budworth	...	4	...	...	...	...	4
Ringway	...	2	1	...	...	...	3	Bollington	...	...	...	...	...	...	...
Timperley	...	12	7	...	2	...	21	High Legh	...	8	4	...	...	...	12
								Millington	...	...	...	...	...	...	...
								Partington	...	2	...	1	1	...	4
<i>Altrincham</i>								Warburton	...	...	...	1	...	...	1
<i>District</i>	...	36	20	...	2	...	58	<i>Lymm District</i>	...	14	4	1	1	1	21
Bexton	Mobberley	...	12	...	1	1	...	14
Marthall	Northen Etchells	...	2	1	...	1	...	4
Mere	Styal	...	5	...	1	...	...	6
Ollerton	<i>Wilmslow District</i>	...	19	1	...	2	2	24
Peover Inferior								
Peover Superior	1	...	...	...	1	Baguley	...	1	...	1	...	...	2
Pickmere	1	...	...	...	1	Carrington	...	2	...	...	...	...	2
Plumbley	...	1	...	...	...	...	1	Northenden	...	6	...	1	...	...	7
Rostherne	<i>Sale District</i>	...	9	...	1	1	...	11
Tabley Inferior								
Tabley Superior								
Tatton								
Toft								
<i>Knutsford District</i>	...	1	2	...	...	...	3	SUMMARY :							
								<i>Altrincham</i>	...	36	20	...	2	...	58
								<i>Lymm</i>	...	14	4	1	1	1	21
								<i>Knutsford</i>	...	1	2	...	...	...	3
								<i>Wilmslow</i>	...	19	1	...	2	2	24
								<i>Sale</i>	...	9	...	1	1	...	11
								<i>Bucklow District</i>	...	79	27	2	6	3	117

TABLE 47.

Shewing Births, Birth-rate, Deaths, and General and Zymotic Death-rates, and compared with average of last 10 years; and Deaths in Old Age and Infancy, and percentage of these to Total Deaths; for the Year 1904.

RURAL PART OF SUB-DISTRICT OF	TOTAL.			BIRTH RATE.		DEATH RATE.				DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.	
	Births.	Deaths	Zymotic Deaths.	1903.	1904.	General.		Zymotic.		At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.
						1903.	1904.	1903.	1904.				
Altrincham.	163	88	7	24·3	22·4	13·8	12·1	2·7	1·0	28	17	32	19
Lymm ...	63	31	2	26·4	23·6	11·5	11·6	0·7	0·7	10	2	32	6
Knutsford...	74	39	1	19·3	20·4	12·1	10·7	0·5	0·3	15	2	38	5
Wilmslow ...	61	36	4	19·0	17·4	11·4	10·3	0·6	1·1	13	5	37	14
Sale ...	94	48	7	26·9	25·8	17·1	13·2	1·4	1·9	17	13	35	27
Total ...	455	242	21	23·0	21·9	13·9	11·6	1·0	1·0	83	39	34	12

TABLE 48.—Births 1904.

Rural part of Sub-District of	1st Quarter.				2nd Quarter.				3rd Quarter.				4th Quarter.				Total.			
	M.	F.	Total.	Rate.	M.	F.	Total.	Rate.	M.	F.	Total.	Rate.	M.	F.	Total.	Rate.	M.	F.	Total.	Rate.
Altrincham ...	24	20	44	24·4	22	25	47	26·1	21	15	36	19·7	14	22	36	19·7	81	82	163	22·4
Lymm ...	8	9	17	25·6	8	8	16	24·1	5	8	13	19·3	10	7	17	25·3	31	32	63	23·6
Knutsford ...	11	7	18	20·0	6	8	14	15·5	9	9	18	19·8	8	16	24	26·4	34	40	74	20·4
Wilmslow ...	10	11	21	24·2	6	9	15	17·2	5	8	13	14·8	7	5	12	13·6	28	33	61	17·4
Sale ...	14	13	27	29·8	12	9	21	23·2	13	10	23	25·1	11	12	23	25·1	50	44	94	25·8
Total ...	67	60	127	24·6	54	59	113	21·8	53	50	103	19·7	50	62	112	21·4	224	231	455	21·9

TABLE 49.

Deaths 1904.

Rural part of Sub-District of	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.
Altrincham	27	14·9	16	9·0	25	13·7	20	11·0	88	12·1
Lymm ...	5	7·5	8	12·0	13	19·3	5	7·5	31	11·6
Knutsford ...	11	12·2	10	11·1	9	9·9	9	9·9	39	10·7
Wilmslow .	9	10·3	10	11·5	5	5·7	12	13·6	36	10·3
Sale ...	12	13·2	9	9·9	15	16·4	12	13·1	48	13·2
Total ...	64	12·4	53	10·2	67	12·8	58	11·1	242	11·6

TABLE 50.

Shewing the position of the Bucklow District as compared with 12 other Rural Districts in Cheshire in 1903.

	Birth Rate.	Place in List.	Death Rate.	Place in List.	Zymotic Death Rate.	Place in List.	Infantile Mortality Figure.	Place in List.
Best of 13 ...	27·5	—	9·8	—	0·0	—	32	—
Worst of 13.	19·6	—	14·6	—	1·4	—	127	—
Bucklow ...	23·2	6	13·4	9	1·4	13	114	12

TABLE 51.

Shewing Population, Census, 1901; Total Deaths, Deaths from Special Diseases, and at Special Ages, in entire Sanitary District, the Registration Sub-Districts, and the individual Townships, in 1904.

POPULATION CENSUS 1901.	REGISTRATION DISTRICTS AND TOWNSHIPS.	TOTAL DEATHS.	DEATHS FROM SPECIAL DISEASES.								TWO GROUPS OF AGES.		
			Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping Cough.	Diarrhoea.	Total Zy- motic.	Phthisis.	Erysipelas.	Puerperal Fever.	At 65 Years and Upwards.	Under 1 Year.
424	Ashley ...	6	...	...	...	...	...	...	1	...	...	3	...
2644	Dunham Massey ...	32	...	1	...	...	1	2	4	3	...	10	7
491	Ringway ...	3	...	...	...	...	...	...	...	...	...	1	1
3215	Timperley ...	47	...	1	...	...	1	1	3	4	...	14	9
6774	<i>Altrincham District</i>	88	...	2	...	...	2	3	7	8	...	28	17
110	Agden ...	1	...	...	...	...	...	...	...	...	...	...	...
423	Aston-by-Budworth ...	4	...	...	...	...	...	...	...	...	...	1	...
215	Bollington ...	...	...	...	...	...	...	...	...	...	...	...	...
794	High Legh ...	9	1	...	...	...	...	...	1	...	...	2	1
225	Millington ...	5	...	...	...	...	...	...	...	...	...	3	...
552	Partington ...	8	...	...	...	...	1	...	1	...	...	3	1
403	Warburton ...	4	...	...	...	...	...	...	...	1	...	1	...
2722	<i>Lymm District</i>	31	1	...	...	...	1	...	2	1	...	10	2
124	Bexton ...	2	...	...	...	...	...	...	...	1	...	...	...
244	Marthall ...	2	...	...	...	...	...	...	...	...	...	1	...
437	Mere ...	3	...	...	...	...	...	...	...	...	...	1	...
270	Ollerton ...	7	...	...	...	...	...	...	...	...	...	3	...
144	Peover Inferior ...	...	...	...	...	...	...	...	...	...	...	...	...
549	Peover Superior ...	5	...	...	...	...	...	...	...	...	...	3	...
203	Pickmere ...	3	...	...	1	...	...	1	...	...	...	1	...
333	Plumbly ...	2	...	...	...	...	...	...	...	...	...	1	...
413	Rostherne ...	8	...	...	...	...	...	...	...	2	...	1	2
129	Tabley Inferior ...	1	...	...	...	...	...	...	...	...	...	...	...
493	Tabley Superior ...	5	...	...	...	...	...	...	...	...	...	3	...
120	Tatton ...	...	...	...	...	...	...	...	...	...	...	...	...
176	Toft ...	1	...	...	...	...	...	...	...	...	...	1	...
3635	<i>Knutsford District</i>	39	...	...	1	...	...	1	3	...	...	15	2
1353	Mobberley ...	20	1	...	...	...	1	1	3	...	1	7	3
738	Northern Etchells ...	5	...	...	...	...	...	...	...	...	...	2	1
1153	Styal ...	11	...	...	...	...	1	...	1	2	...	4	1
3244	<i>Wilmslow District</i> ...	36	1	...	...	...	2	1	4	2	1	13	5
834	Baguley ...	8	...	...	1	...	1	...	2	...	...	5	...
514	Carrington ...	7	...	...	...	...	...	...	...	...	...	3	...
2127	Northenden ...	33	...	...	...	...	1	4	5	3	...	9	13
3475	<i>Sale District</i>	48	...	...	1	...	2	4	7	3	...	17	13
19850	{ <i>Bucklow Rural</i> <i>District.</i> }	242	2	2	1	1	7	8	21	17	1	83	39

TABLE 52.

Factories and Workshops. Cow-keepers and Milk-sellers.

TOWNSHIP.	Mr. McKenzie.						Mr. Metcalfe.	
	Factories.	Workshops	Domestic Workshops	Total.	Defects Found and Notices Served.	No. of inspections made.	Cow-keepers.	Milk-sellers.
Ashley ..	—	2	3	5	—	5	24	13
Aston-by-Budworth	1	1	3	5	1	1	36	8
Agden ...	—	2	—	2	1	2	3	2
Baguley ...	—	6	—	6	4	2	6	2
Bexton ..	3	1	—	4	—	5	5	4
Bollington ...	1	1	—	2	2	2	8	5
Carrington ...	—	4	5	9	—	8	9	1
Dunham Massey ...	2	13	7	22	2	19	35	17
High Legh ...	—	5	1	6	4	5	44	10
Marthall ...	2	2	—	4	1	3	19	12
Mere ...	1	2	4	7	3	7	24	4
Millington ...	—	1	1	2	1	2	5	2
Mobberley ...	4	11	13	28	7	14	59	28
Northenden ...	2	33	29	64	20	41	14	11
Northen Etchells ...	—	4	4	8	4	4	12	8
Ollerton ...	—	1	3	4	2	3	13	9
Partington ...	3	4	3	10	—	6	8	2
Peover Inferior ...	—	3	—	3	—	3	6	2
Peover Superior ...	1	4	2	7	2	4	27	12
Pickmere ...	—	2	3	5	—	4	16	4
Plumbley ...	1	1	5	7	2	4	18	5
Ringway ...	1	1	—	2	1	2	27	9
Rostherne ...	—	—	4	4	—	4	8	4
Styal ...	1	5	3	9	2	4	17	12
Tabley Inferior ...	—	—	—	—	—	—	4	4
Tabley Superior ...	—	2	9	11	2	6	22	15
Tatton ...	—	—	1	1	—	1	1	—
Timperley ...	4	20	20	44	22	34	14	8
Toft ...	—	1	1	2	2	4	8	4
Warburton ...	1	1	3	5	—	2	8	2
Totals ...	28	133	127	288	130	203	500	219
In 1903	28	127	132	287	85		494	214

TABLE 53.

Home Office Table.—Annual Report of Medical Officer of Health for 1904, for the Rural District Council of Bucklow, Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories (Including Factory Laundries.)	36	5	...
Workshops (Including Workshop Laundries.)	150	62	...
Workplaces	152	7	...
Homeworkers' Premises	2	...	...
Total	340	74	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.		Referred to H.M. Inspector.	Number of Prosecutions
	Found.	Remedied.		
<i>Nuisances under the Public Health Acts:—</i>				
Want of Cleanliness ...	44	44	...	...
Want of Ventilation ...	9	9	...	...
Overcrowding ... ..	...	...	...	...
Want of drainage of floors	2	1	...	...
Other Nuisances	11	11	...	...
<i>Sanitary Accommodations—</i>				
Insufficient	4	1	...	...
Unsuitable or defective	4	3	...	...
Not separate for sexes	...	...	...	...
Total	74	69	...	...

3.—OTHER MATTERS.

Class.	Number.
<i>Matters notified to H.M. Inspectors of Factories:—</i>	
Failure to affix Abstract of the Factory and Workshop Act	27
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act—	
Notified by H.M. Inspector	...
Reports (of action taken) sent to H.M. Inspectors	...

	Lists.	Number of Outworkers.
Homework :—		
Lists received	1	2
Addresses of outworkers—received from other Authorities	1	...

Workshops on the Register at the end of 1904:

Workshops ... ..	...	...130
Workplaces ... ..	...	...132
		—
Total number of Workshops on Register ...	...	...262
		—
Besides Factories ... ..	...	... 30

TABLE 54.

Inspections made.

January.	Toft, Bexton.
February.	Carrington, Partington, Warburton, Mere, Ros- therne, Tatton.
March.	Dunham Massey, Ashley, Ringway.
April.	Mobberley.
May.	High Legh, Aston-by-Budworth, Pickmere.
June.	Timperley, Baguley, Northen Etchells, Styal, Ringway.
July.	Ollerton, Marthall, Peover Superior.
September.	Tabley Superior, Plumbley, Peover Inferior, Toft, Bexton.
November.	Northenden.
December.	Bollington, Agden, Millington, Timperley.

TABLE 55.

Summary of the work done in the Nuisance Inspector's Department in the Bucklow Rural District for the year 1904.

Dwelling-houses and Schools—

Houses inspected ...	...	...	...	137
Schools inspected ...	...	...	...	3
Foul conditions ...	...	...	...	105
Structural defects ...	...	...	...	119

Drainage—

Drains tested ...	...	...	...	89
Drains relaid ...	...	...	...	43
Drains amended ...	...	...	...	17

Dairies and Cowsheds—

Farms	} Inspections	...	...	524
Cowsheds				
Dairies				
Milkshops				
Notices served ...	...	...	...	88
Applications for registration ...	...	...	...	7

Food Inspection—

Slaughter-houses	} Inspections	243
Butchers' shops				
Fish-carts				
Meat-carts				
Fruit shops				

Disinfection and Infectious Disease—

Number of visits . .	...	...	...	183
Houses disinfected	...	...	...	86

Scavenging—

Ashpits inspected...	...	...	...	1725
Ashpits emptied ...	...	...	...	3572
Pails ...	...	...	...	1319
Dust-bins	...	...	...	220
Loads removed	...	...	...	2420

General—

Re-Inspections ...	...	...	...	1085
Pigsties inspected	...	...	...	123
Water Certificates Granted (houses)	...	...	...	76
Complaints	...	...	...	43
Privy Middens converted to W.C's.	...	...	...	18
" " " Pails	...	...	...	10
" " abolished	...	...	...	31
Overcrowding	...	...	...	2
Smoke Nuisances..	...	...	...	1
Water samples taken	...	...	...	7
Notices served	...	...	...	91

BUCKLOW RURAL DISTRICT.

Note.—The matter found on pages 3 and 4, and 7 to 20 inclusive, is to be considered an integral part of this Report.

Area—This remains unchanged for 1904, and comprises 30 Townships, whose names, and grouping will be found in Tables 46 and 51; but in the statistics of previous years in Tables 36 and 37, it must be remembered that in 1895 Ashton-on-Mersey and Knutsford, and in 1900 Hale, were taken from the Rural District, and created Urban Districts. It would be possible to make corrections of population in Tables 36 and 37; but it would not be possible, with the means at my disposal, to correct the figures in the other columns; and so the populations are left uncorrected.

The grouping in five Sub-Districts (see page 55, Annual Report 1903,) instead of four as formerly, also makes it impossible to fill up Table 37 properly (Local Government Board Table II.), so that the figures up to 1902 have to remain as before; those resulting from the new arrangement can only begin with 1903.

Population.—See page 8. The estimate is 20,700 for 1904, an increase of 284 over 1903. The calculation is mainly based upon the assumed maintenance of previous known conditions. The distribution among the Sub-Districts will be found in Table 37; and that of the townships in Table 51.

Public Institutions.—These include the Manchester Consumption Hospital, actually in Dunham Massey; the Baguley Sanatorium now also belonging to Manchester; three small temporary small-pox hospitals; the Cottage Homes at Styal; and the Epileptic Colony in Marthall.

Tables.—See paragraph on page 7. The “average” birth-rate changes from 23·0 to 22·8; the “average” death-rate from 13·9 to 13·5; the “average zymotic” death-rate remains at 1·0; and the average Infantile Mortality figure from 118 becomes 116.

Births.—(Tables 36 and 48). The births registered are 224 males and 231 females, total 455. The number is 20 less than in 1903, and the Rate is only 21·9. This is the same Rate exactly as shown by 1901 and 1902 and only 0·1 different from 1900. The average is 22·8; so that there is a steady decline. The average for England and Wales for 1904 is 27·9, or (excluding the 218 largest towns) 26·8.

The Rates for the Sub-Districts are 22·4, 23·6, 20·4, 17·4, and 25·8 respectively.

Deaths.—(Tables 36, 47, 49, 51). The total number, after correction, is 242 ; and the Rate is 11·6. This is the smallest number in Table 36 save one ; and the actual smallest Rate ; though it only beats 1902 by 0·1, and 1898 by 0·2. The average death-rate is 13·5 ; the figures for England and Wales for 1904 being 16·2, and (less the large towns) 15·3. The position of the Bucklow District is thus exceedingly good ; though Table 50, which applies to 1903, shows that other Rural Districts in Cheshire did even better in that year.

The corrections are made as follows :—deaths registered in the District but excluded from the Tables, 1 in the Consumption Hospital, (from Eccles) ; 9 in the Baguley Sanatorium, (3 from Withington, 2 each from Levenshulme and Ashton-on-Mersey, and 1 each from Moss Side and Hale) ; 2 in the Bucklow Small-pox Hospital, (Knutsford and Sale) ; and 7, not in Public Institutions, (belonging to Withington and Hulme, 2 each ; Glasgow and Knutsford 1 each ; and 1 unknown). Deaths registered in other Districts, but included in the Tables, 13 in the Union Workhouse at Knutsford, 4 in the Altrincham Hospital, 1 in the Stockport Infirmary, and 1 at Blackpool. This gives a total of 19 on each side, curiously enough ; and the only variation from the strict letter of the instructions is the exclusion of 7 and the inclusion of 1 “not in public institutions.” If these be ignored, the number of deaths would be 248, and the Rate would be 11·9. As however they have all been duly notified to the Districts concerned, I consider myself justified in compiling the Tables as I have done. Of all the Medical Officers of Health with whom I have been in communication, Dr. Railton, of Withington, is the only one who has objected to receive my notices.

It is to be observed that the official instructions direct that “deaths of residents registered in Public Institutions beyond “the District” are to be taken into account ; but *no directions are given as to how such information is to be obtained.*

The death-rates for the Sub-Districts are 12·1, 11·6, 10·7, 10·3, 13·2, respectively. The highest Rates are as usual found associated with semi-urban conditions, and the lowest with purely rural.

Infant Mortality.—The number of deaths of infants under 1 year is 39, which in proportion to 455 births is as 86 to 1000. The average figure being 116, this is no less than 26 per cent. improvement for 1904 over the average ; and with the exception of 1902 is the lowest figure in Table 36. Reference to Table 39, shows the causes of these 39 infantile deaths, and, as usual,

the sad comment has to be made that nearly one-half of them were due to preventible causes. Table 37 also shows with suggestiveness the very unequal distribution of these deaths among the Sub-Districts.

Comparative Position.—(Table 50). This, it must be noted, refers to the year 1903, which was not so good a year as 1902. In 1903 Bucklow had the heaviest zymotic death-rate of the 13 Rural Districts in the County, and the highest infant mortality but one. Its average place therefore fell to 10th, compared with 9th, 10th, and 5th in the 3 preceding years. I had anticipated a better result; but other Rural Districts had evidently been more fortunate, and so the Bucklow figures, though not bad in themselves, do not show up so well in the Comparative Table. 1904 ought in turn to show a considerable improvement.

Illegitimate Infants.—The number born in 1904 was 14, or 3 per cent. of all births. (Table 41.) Of these 5 have died, or 35·7 per cent.; whilst 34 deaths among 441 legitimate births is 7·7 only. This is a more striking divergence than usual; last year having contrasted only 15 with 11·2; the year before 9·1 with 7·2; and 1901 15·4 with 12·8

Mortality among Old People.—(Table 47). Number of deaths 83, or 34 per cent. of all deaths. In the 3 years preceding it has been 33, 36, and 32 per cent. This is a high percentage, and is evidence of longevity in the District.

Uncertified Deaths.—None. (There was only 1 in 1903, and 2 in 1902; making now 3 in 3 years.)

Coroner's Inquests.—All details are given in Table 42. They number 18, (as compared with 27, 24, and 27, in the 3 preceding years). 4 were held on non-residents, and 14 on residents, (5 of the latter outside the Bucklow District.) 8 belonged to the Altrincham, 3 to the Lymm, and 1 each to the Knutsford, Wilmslow, and Sale Sub-Districts.

Notifications of Infectious Disease.—Tables 38, 43, and 46 contain all information in an easily recognisable form. The total number is slightly above the average. Small-pox is absent. For the fourth year in succession diphtheria is above the average. Scarlet fever slightly above the average. Enteric fever only 2 cases. A moderate return, with some good, and some bad features, but nothing startling.

Zymotic Diseases.—In the previous paragraph we have considered the diseases scheduled in the Notification Act. We turn now to a different list, viz.: that of the Registrar General. His list includes small-pox, measles, scarlatina, diphtheria, whooping-cough, fever, and diarrhœa. As three of these are not notifiable, we have no means of ascertaining or recording

the number of cases that occur. The only figures which we can compare are those which enumerate the deaths registered from these diseases. Table 44 gives the zymotic mortality for 15 years. (Not corrected for alterations in area and population.) The number of deaths in 1904 was 21, and the Rate 1·0. This is slightly below the average number, but the Rate is equal to the average. It is to be noted that only 4 deaths occurred from the notifiable diseases, compared with 17 from those that are not notifiable. The Rate is made up as follows :—

Small-pox	...	...	...	...	...	—
Measles...	...	...	...	...	...	0·04831
Scarlatina	...	...	...	...	...	0·09662
Diphtheria	...	...	...	...	...	0·09662
Whooping-cough	...	...	...	...	...	0·33817
Fever ...	...	...	...	...	...	0·04831
Diarrhœa	...	...	...	...	...	0·34648
						<hr/>
						0·97451

Small-pox.—Absent.

Vaccination.—Table 45. These figures include the Urban Districts within the Area of the Bucklow Union, as explained in detail in my Annual Report, 1901, page 24. I give the figures for the two half-years of 1903; then the totals for the seven years next preceding. In 1903, out of 1,873 surviving children, 1,793 are known to have been vaccinated; or 95·7 per cent.; whilst if cases medically postponed, and those removed and traced, be assumed to have been ultimately vaccinated in the same proportion, among the survivors, (an assumption to which I can see no logical objection), the percentage vaccinated, of the whole, is nearly 98·0. The similar Rates for the whole 8 years, combined, are 93·2 and 97·0.

Measles.—This disease was somewhat widely prevalent in the later months of the year; and many schools were closed for short periods; among them being Nether Tabley, Pickmere, Over Peover, and Ollerton. Only one death occurred, a boy 2 years of age, at Pickmere, in December; which must be regarded as a piece of good fortune, seeing that no attempt was made to control the epidemic, beyond the school-closure.

Scarlet Fever.—Though there were (the apparently large number of) 79 cases, yet they were so distributed in time and in locality that there was never anything worth calling an epidemic, except in Mobberley in May, when 10 cases occurred, and caused momentary alarm; and in High Legh in September. Thus Plumbley had 1 case, in May; Ashley 1 in September; Baguley 1 in October; Carrington 2 in May; Partington 1 in May and 1 in September; Ringway 1 in July and 1 in Novem-

ber; Northen Etchells 2 in July; Aston 3 in April and 1 in August; Styal 1 in January, 2 in July, 1 in August, and 1 in November; Northenden 1 in January, 2 in February, 1 in July, and 2 in October; High Legh 2 in January, 5 in September, and 1 in October; and Mobberley 2 in January, and 10 in May. Including the two last-named small outbreaks, we thus dispose of 46 of the cases as scattered. The remainder occurred in Timperley (12), and in Dunham Massey (21). 8 of the Timperley cases and 10 of the Dunham cases were in the portions of those Townships which lie against the boundary of the Altrincham Urban District; the remainder were widely scattered over a large area. The cases were also distributed throughout the year. 50 of the cases were treated in Hospital, of which 1 died; and 29 remained at home, of which 1 died. Table 46 shows 16 Townships without cases.

Return Cases.—None observed.

Value of Hospital Treatment.—Certain Medical Officers of Health are now throwing doubt upon the value of removal to hospital as a means of checking an epidemic. Without any intention of joining the controversy, and without any wish to criticise opinions based upon results observed in large towns, I yet feel it to be my duty to record without hesitation my own firm opinion that in the Bucklow District prompt removal to hospital is the one and only effectual means whereby I can record, year after year, "no epidemic," in spite of the constant occurrence of individual cases, scattered over a wide area, and representing the introduction of infection so many times and from so many independent sources.

Diphtheria.—27 cases notified; 13 removed to Hospital, of which 1 died; and 14 remained at home, of which 1 died. The disease seems to be becoming more prevalent, which appears likely to be due to an increase of infectivity; for personal contact was probably more common ten years ago than to-day. We have had 112 cases in the last four years; whilst if we exclude 1894 which had 40 cases, there were only 65 cases in the 10 years preceding. The use of antitoxin is now general, and largely accounts for the diminution in the number of deaths. In 1893 and 1895 one-third of the cases were fatal; which would have meant 9 deaths in 1904, instead of 2. Only 7 Townships were involved, whereof 4 had only 1 case each, viz.: Peover Superior, March; Pickmere, April; Northen Etchells and Ringway, August. High Legh had 2 cases in June and 2 in September; and (as with scarlet fever) Dunham Massey and Timperley provide the rest. Timperley had 3 cases in March, and 1 each in April, June, August, and October; Dunham had 1 in February, 5 in March, 5 in April, and 1 in September. Of

these 19 cases, all but two occurred in the parts of the Townships lying adjacent to Altrincham.

Whooping-cough.—7 deaths. These occurred in 7 different Townships, and in 7 different months. The inference would seem to be that a mild epidemic was travelling across the District during the year.

Enteric Fever.—Two cases notified; 1 death. The first case occurred in Warburton in June; the fatal case in Baguley in September. Neither was removed to Hospital.

Diarrhœa—Eight deaths, seven being infants. Northenden had 4 deaths in August and September; Dunham 2 in September; Timperley 1 in August, and Mobberley 1 in October.

Influenza.—7 deaths. Timperley 2 in February and March; Mobberley 1 in March; Ashley 2 in April; High Legh 1 in October; and Styal 1 in November.

Puerperal Fever.—3 cases, 1 death, (Mobberley).

The Midwives' Act, 1902.—See page 18.

Erysipelas.—6 cases; 1 death, (Mobberley).

Phthisis.—17 deaths; Rate 0·82. Timperley 4, Dunham and Northenden 3 each; Rostherne and Styal 2 each; Ashley, Warburton, and Bexton 1 each. Average age at death, 40 years. The deaths in the preceding four years numbered 10, 15, 22, 18.

Other Tubercular Diseases.—Timperley and Styal 2 each; Dunham, Partington, Peover Superior, Ollerton, Rostherne, 1 each. 3 were cases of meningitis, 3 of peritonitis, 2 of glandular and 1 of joint disease.

Cancer.—The number of deaths is 12; and the Rate 0·57. Dunham Massey had 5 cases; Warburton 2; Timperley, Partington, Carrington, Peover Superior and Tabley Superior 1 each. There were 10 males and 2 females. In 9 cases the digestive system was the seat of the disease; in 2 the lungs; and in 1 the thigh. Ages from 12 to 74, with an average of 49, years.

Bronchitis, Pneumonia, &c.—40 deaths, Rate 1·92. The number was 44, 35, and 39, in the 3 preceding years.

Alcoholism.—2 deaths; M., 68 years, Northenden, and M., 45 years, Rostherne.

Diseases and Accidents of Parturition.—1 death at Northenden from cellulitis following premature confinement.

Heart Diseases.—30 deaths, Rate 1·44

Accidents.—Nine, } enumerated in Table 42.

Suicides.—Three, }

Anthrax.—Four cases were reported, in Northen Etchells, Bexton, Mere, and Carrington. All the animals affected were cows. The carcasses in each case were cremated, and the premises disinfected, by the County Police.

Isolation Hospitals.—During 1904 4 cases of scarlet fever occurred in the Cottage Homes at Styal, and were dealt with by the Chorlton Union. 7 cases of small-pox were received in the Newhall Green Hospital, but none of these belonged to the Rural District. All other cases removed were sent to the Baguley Sanatorium; and include 46 cases of scarlet fever, and 13 of diphtheria. 63 cases, out of 117 notified, is 54 per cent. No attempt to remove cases was made before 1898. The full figures are

Year.	Notifications.	Removals.	Percentage.
1898	46	5	10
1899	106	16	15
1900	96	42	43
1901	158	50	31
1902	102	27	27
1903	97	57	59
1904	117	63	54

Two deaths occurred among the 63 hospital cases, or just over 3 per cent.; and 5 deaths among 54 cases not removed, or just over 9 per cent.

Schools.—See paragraph on “Measles.”

Disinfection.—See page 11; also Inspector’s Report.

Disinfection of Premises.

Dairies and Cowsheds.

Inspection of Food-supplies.

Slaughter-houses.

Removal of Refuse.

House to House Inspection.

The whole of these matters are dealt with in Mr. Metcalf’s Report, which is appended.

The systematic “house to house” inspection has been continued; the total number now inspected reaching about 238.

Sewage Treatment.—It is unnecessary to repeat this year the description of the three small sewage-disposal works, as no alterations have taken place.

Dunham Massey.—The old outfall was inspected for the Mersey and Irwell Committee on May 4th, effluent reported “fair.” (See Annual Report 1903, page 69).

The new works are even yet not in operation. In May last defective work was found, which was attributed to the contractors; and a dispute arose which led to the stopping of all work; and the contractors are now taking legal proceedings against the Council. A very small length of pipe-sewer remains to be laid; but of course until it is done it is impossible to connect any property to the new works, as the severance is in

the line of the main outfall sewer. This is extremely unfortunate but appears unavoidable.

Timperley.—Mersey and Irwell Committee's reports:—February 24th, good; April 13th, good; May 12th, good; September 19th, fair; November 17th, fair.

Northenden.—Same:—January 20th, good; March 10th, good; April 7th, good; June 15th, fair; September 1st, fair; November 2nd, fair.

Partington.—It is proposed to make a small filter for the sewage of Lock Lane and neighbourhood; but it has not yet been commenced.

Abatement of Nuisances.—On this subject, and several others which have generally received mention, figures will be found in Table 55, which the Inspector has prepared at my suggestion. This Table is to be read as part of the Inspector's Report.

Factories and Workshops.—I have accompanied Mr. McKenzie from time to time in his journies of inspection. Full particulars are contained in his report and Tables. The work has been systematically and thoroughly carried out.

The Public Health Acts Amendment Act, 1890, has been adopted; but no standard has to my knowledge been fixed by the Council relating to Section 22. The amount of accommodation enforced has been that which has seemed necessary in each case.

Systematic Inspections.—Enough has been said in the preceding pages, and will be found in the following reports from Mr. McKenzie and Mr. Metcalfe, to render it hardly necessary to give the formal assurance asked for in the Local Government Board Memorandum. As I have said before, I do not know any District (of this kind) which is more thoroughly inspected, systematically and periodically, than this District.

Conclusion.—I have endeavoured to condense my Report this time as much as possible; not by omitting any subject which ought to be included, nor by omitting any information which ought to be given, but simply by abstaining from all "ornamental" writing. My report may seem bald and uninteresting, for this reason, but I trust it will at least be found accurate and complete.

Having now written ten reports for the Bucklow District, I have gradually evolved a form, or framework, to which I propose in future to adhere. This will greatly lighten the work of composition. At the same time I shall always be glad to receive suggestions for improvement.

T. W. H. GARSTANG,

January 3rd, 1905.

D.P.H.

Factory and Workshops Inspection. Annual Report 1904.

The Register at the close of the year contains 30 Factories, 132 Workshops, 130 Domestic Workshops, and 2 Outworkers.

An Inspection Time-table was prepared at the beginning of the year, which has been closely followed and has been found to work extremely well.

The number of Inspections made during the year amounts to 340. 74 Notices were served by the authority of the Council for the following :—lime-washing 44, want of ventilation 9, want of floor-drainage 2, other nuisances 11, insufficient sanitary accommodations 4, defective or unsuitable 4. Of these 69 have been remedied. 27 cases of failure to affix the abstract of the Act have notified to H.M. Inspector.

There are no underground bakehouses within the District.

One list, containing 2 outworkers, has been received from the Manchester Corporation.

Of the 30 Factories in the District there are 11 Corn Mills, 5 Brick-works, 1 Sanitary Laundry, 2 Tanneries, 3 Joiners, 4 Engineering-works, 1 Paper Mill, 1 Camera-works, 1 Cotton Mill, 1 Packing-works.

Of the 262 Workshops there are 43 Joiners, 33 Smiths, 20 Cobblers, 91 Laundries, 33 Dressmakers, 1 Cycle-works, 7 Contractors, 15 Bakehouses, 4 Basket-makers, 4 Plumbers, 3 Tailors, 2 Brick-works, 1 Engine-maker, 1 Creamery, and 1 Golf-stick Repairer.

The number of Employees amounts to 410 men, 211 women, and 26 apprentices.—Total 647.

J. McD. McKENZIE,

District Surveyor.

Plans Committee Report for 1904.

The Fortnightly Meetings of the Plans Committee have been held regularly throughout the year prior to the Council Meeting.

152 Sets of Building Plans were submitted for approval. Of these 109 were approved and 43 were referred back for amendment.

The Plans submitted comprise 163 Dwelling-houses, 18 new Farm Buildings, 6 Works, 7 Sanitary Conveniences, 2 new Roads, 3 new Sewers, 2 Carbide Storage and Generating Houses, 1 School, 5 Shops, 4 Stables, 2 Churches, 3 Billiard Rooms, 4 Irishmen's Bothys, 1 Motor-house, 1 Smithy, and 24 alterations and additions to existing buildings.

Plans for 9 houses have been submitted which the Committee refuse to approve. The Committee has paid visits to the site of proposed houses at Northenden, and also to Timperley to inspect the site of proposed shops.

All House Drains have been water-tested.

No legal proceedings have been necessary.

J. McD. McKENZIE.

Canal Boats Inspections. Annual Report, 1904.

During 1904 58 Canal Boats have been inspected in 36 visits.

The Boats were registered as dwellings for 198 persons, and on inspection were found occupied by 113, viz. : 81 men, 23 women, and 4 children, 2 of the latter were in my opinion not attending school, as proved by their school registers, and I communicated with the Runcorn School Board with respect to these two cases.

7 Formal Notices were served for infringement of the Act as follows:—

3 Cases without Certificate on Board, the excuse being that they were not used as dwellings, to which I replied they should have the Certificates cancelled,

3 Cases of dirty cabins.

2 Cases where cabins require painting.

1 Case of defective cabin floor.

2 Cases of defective ventilation.

1 Case of carrying offensive cargo with no proper bulkhead.

All the notices have been complied with and the counterfoils returned showing the various matters have received attention.

No legal proceedings have been necessary.

No case of infectious disease has been met with during the year.

J. McD. McKENZIE,

District Surveyor.

INSPECTOR OF NUISANCES REPORT, 1904.

Dairies, Cowsheds, and Milkshops.—Work under this head, including inspections, has been systematically carried out, as in previous years. Each cowshed, dairy, or milkshop visited has been carefully examined, and when defects were found, they were reported to the Council, and notices were served to carry out the needful improvements. Many special visits have also been made to meet and advise persons responsible as to alterations and amendments. This I am always willing to do; as I find that it saves many mistakes. In a few cases, cowsheds and cows have been found dirty; and special attention has been paid to them. Some farmers have not yet realised the great importance of having clean conditions and surroundings where milk is produced.

Certain cottagers are milk-sellers in the summer time only, and are not registered. I intend to report further on this matter about July next.

A list of cases where notices have been served, but not complied with, will be laid before the Council towards May.

Formal notices were served during the year on 88 persons, in reference to defective drainage, light, ventilation, &c. Lime-washing circulars were sent out in May and October to all cow-keepers and dairy-men. On the whole there has been satisfactory progress during the year. See Table 52.

Tuberculous Cows.—Two cases were notified by the Medical Officer of Health of Manchester; one at Aston and one at Plumley. Both animals were slaughtered; the former was a bad case, and the carcass was destroyed; the latter was a slighter case, and the meat was in part disposed of in the Manchester Market, after inspection.

Food Inspection.—Many examinations of meat, fish, fruit, and vegetables have been made. All was found of good quality. No complaints were received.

Slaughter-houses.—There are 8 in the District, and they are inspected frequently. Verbal notice was given in two cases to cleanse and lime-wash. No complaints were received.

House to House Inspection.—85 additional houses have been inspected. Many sanitary defects were discovered, and reported, and notices served. The tenants recognise the benefit of inspection, and give all assistance.

Overcrowding.—Two cases have been dealt with.

Smoke Nuisance.—One complaint received. The nuisance is believed to be remedied.

Rivers' Pollution.—Ten cases have been reported and dealt with.

House Drainage.—Many houses have been re-drained (see Table 55); and all drains have been water-tested.

Scavenging and Removal of Refuse.—

Northenden.—The work is done by contract; and the monthly returns made show 1558 emptyings of ashpits, and 171 pails; and 575 loads removed.

Dunham Massey and Timperley.—After June last, contracts were terminated, and a scavenging department created. In the first half-year the contractors removed 548 loads from Dunham, from 322 ashpits and 6 pails; and 448 loads from Timperley, from 585 ashpits and 413 pails. Complaints had been numerous. Two horses were purchased by the Council, also carts and implements; and three men engaged; and work commenced on July 12th. A fourth man was found necessary, after a few weeks' experience. The work done to December 31st is as follows:—

	Dunham.	Timperley.	Total.
Houses	851	1542	2393
Ashpits emptied ...	410	697	1107
Pails „	54	675	729
Dustbins „	19	201	220
Loads (ashes)	268	320	588
„ (manure)	75	186	261

The manure (from privies) was sold to farmers and market-gardeners.

Disinfection.—All houses, where infectious diseases occurred, have been disinfected by burning “Formic Sulphugators,” or by spraying with formalin; and the walls stripped and dis-tempered. I should be glad to disinfect periodically where cases of consumption exist, if it were possible to know of them.

R. M. METCALFE,

31st January, 1905.

Inspector.

Biddulph Urban District.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1904.

Population at Census, 1891, 5,290.

„ „ „ 1901, 6,247. Increase, 957.

Estimated Population in middle of 1904, 6,525.

Area of District in Acres (exclusive of area covered by water) 5,057—30=5,027.

Number of Inhabited Houses, 1,260.	} At Census of
Average Number of Persons per House, 4·95.)		1901.

Institutions within the District receiving sick and infirm persons from outside the District: The Isolation Hospital.

Institutions outside the District receiving sick and infirm persons from the District: Union Workhouse at Leek. North Stafford Infirmary. Congleton Cottage Hospital.

Other Institutions, the deaths in which have been distributed among the several localities in the District: None.

Birth Rate per 1,000 living, 33·0.

Death Rate per 1,000 living, 15·2.

Death Rate from Seven Principal Zymotic Diseases, 0·8.

Deaths under one year in proportion to 1,000 Births, 149.

Each birth or death contributes to the Rate 0·15326.

TABLE 56.

(Local Government Board Table I.)

Vital Statistics of Whole District during 1904 and Previous Years.

Name of District, BIDDULPH (URBAN).

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.	Under 1 Year.		At all Ages.					Number.	Rate.
				Number.	Rate per 1000 Births registered.	Number.	Rate.					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	5577	171	30·7	27	157	}	NO	REC	ORD	}	77	13·8
1895	5672	208	36·7	30	144						89	...
1896	5768	188	32·6	26	138	73	2	80	13·6
1897	5863	173	29·5	18	104	79	...	..	...	1	80	13·4
1898	5959	199	33·4	28	140	109	...	...	...	...	110	18·1
1899	6055	210	34·6	29	138	113	...	...	...	1	114	18·5
1900	6141	206	33·5	34	165	85	...	...	..	5	89	14·2
1901	6247	245	39·2	22	90	117	...	...	...	3	119	18·7
1902	6367	226	35·5	34	150	83	...	5	...	5	89	13·8
1903	6440	225	34·9	22	98	...	...	...	...	2	93	15·5
Averages for years 1894-1903	6009	205	34·1	27	132	93	...	...	...	2	93	15·5
1904	6525	215	33·0	32	149	98	...	2	...	2	99	15·2

TABLE 57.—(Local Government Board Table III.)

Cases of Infectious Disease notified during the Year 1904.

Name of District, BIDDULPH (URBAN).

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						No. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.
	At all Ages.	At Ages—Years.					
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.		65 and upwards.
Small-pox ...	..	..	..	..	..	..	..
Cholera ...	..	..	..	..	..	..	..
Diphtheria ...	1	8	16	4	1	24	24
Membranous Croup	..	..	..	..	..	..	..
Erysipelas ...	2	..	..	2	..	..	..
Scarlet Fever	14	4	6	3	1	..	..
Typhus Fever	..	..	2	..	..	..	..
Enteric Fever	3	..	..	1	..	..	..
Relapsing Fever	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..
Puerperal Fever	1	..	..	..	1	..	..
Plague ...	..	..	..	..	..	..	..
Totals ...	50	12	24	10	3	..	24

TABLE 58.

(Local Government Board Table IV.)

Causes of, and Ages at, Death during Year 1904.

Name of District, BIDDULPH (URBAN).

CAUSES OF DEATH. I	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Total Deaths whether of "Residents" or non "Residents" in Public Institu- tions in the District. 16
	2 All Ages.	3 Under 1.	4 1 and under 5.	5 5 and under 15.	6 15 and under 25.	7 25 and under 65.	8 65 and upwards.	
Small-pox ... ..	...	...	...	...	...	...	...	...
Measles	1	1	...	...	...	...	...	...
Scarlet Fever ... ..	...	...	...	...	...	...	...	...
Whooping-cough... ..	...	...	...	...	...	...	...	...
Diphtheria and Membran- ous Croup	4	1	3	...	...	...	...	2
Croup ... ..	...	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...
{ Enteric ... ..	...	...	...	...	...	...	...	...
{ Other continued... ..	...	...	...	...	...	...	...	...
Epidemic Influenza ... ..	...	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...
Diarrhoea ... ..	...	...	...	...	...	...	...	...
Enteritis ... ..	...	...	...	...	...	...	...	...
Puerperal Fever ... ..	...	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...
Other Septic Diseases ... ..	...	...	...	...	...	...	...	...
Phthisis	9	...	...	...	3	6	...	...
Other Tubercular Diseases	2	2	...	...	...	...	...	...
Cancer, Malignant Disease	2	...	...	...	...	1	1	...
Bronchitis	6	1	1	...	...	1	3	...
Pneumonia	20	4	3	...	...	7	6	...
Pleurisy ... ..	...	...	...	...	...	...	...	...
Other Diseases of Respira- tory Organs ... ..	...	...	...	...	...	...	...	...
Alcoholism ... ..	...	...	...	...	...	...	...	...
Cirrhosis of Liver { ... ..	...	...	...	...	...	...	...	...
Venereal Diseases ... ..	...	...	...	...	...	...	...	...
Premature Birth	2	2	...	...	...	...	...	...
Diseases and Accidents of Parturition ... ..	...	...	...	...	...	...	...	...
Heart Diseases	7	...	...	...	1	3	3	...
Accidents	2	...	...	2	...	...	...	...
Suicides ... ..	...	...	...	...	...	...	...	...
Debility, &c.	18	18	...	...	...	...	...	...
Convulsions, &c.	3	3	...	...	...	...	...	...
Old Age	6	...	...	...	...	1	5	...
Cerebral Diseases... ..	8	...	...	...	...	1	7	...
Acute Rheumatism	1	...	...	...	...	1	...	...
All other causes	8	...	1	2	...	3	2	...
All causes	99	32	8	4	4	24	27	2

TABLE 59.

Shewing Births, Birth-rate, Deaths, and General and Zymotic Death-rates, and compared with average of last 10 years; and Deaths in Old Age and Infancy, and percentage of these to Total Deaths; for the Year 1904.

TOTAL.			BIRTH RATE.		DEATH RATE.				DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.	
Births.	Deaths	Zymotic Deaths.	Average.	1904.	General.		Zymotic.		At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.
					Average.	1904.	Average.	1904.				
215	99	5	34.1	33.0	15.5	15.2	2.0	0.8	27	32	27	32

TABLE 60.

Shewing Deaths, Death-rates, Deaths from Special Diseases, and Old Age and Infantile Deaths, in the Four Quarters of the Year, 1904.

QUARTER ENDING.	Total Deaths.	Rate.	DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.		Measles.	Diphtheria.	ZYMOTIC DEATHS.		Phthisis.
			At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.			Total.	Rate.	
March 31	29	17.9	6	12	21	42	0	0	0	0.0	1
June 30	24	14.8	4	8	17	33	0	1	1	0.6	3
Sept. 30	21	12.8	9	6	43	29	0	1	1	0.6	1
Dec. 31	25	15.2	8	6	32	24	1	1	2	1.8	4

TABLE 61.

Births.

	M.	F.	Total.	Rate.	Of which Ille- gitimate.		
					M.	F.	Total.
1st Quarter	28	17	45	27·7	1	1	2
2nd „	35	25	60	37·0	1	0	1
3rd „	30	35	65	39·7	2	0	2
4th „	24	21	45	27·5	1	1	2
	117	98	215	33·0	5	2	7

TABLE 62.

Shewing position of Biddulph in the County in 1903, compared with 36 other Urban Districts.

STAFFORDSHIRE.	Best of 37 Urban Districts	Worst of 37 Urban Districts	Bid- dulph Figures.	Place of Bid- dulph in the List.
Birth Rate	41·8	23·0	34·9	17
Death Rate	10·8	21·6	13·8	8
Zymotic Death Rate	0·0	6·1	1·1	12
Infantile Mortality	76	215	97	3

TABLE 63.

Notifications of Infectious Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	TOTAL.
1890	—	12	2	3	2	1	20
1891	—	5	1	5	2	2	15
1892	—	18	3	3	—	—	24
1893	—	11	2	—	2	—	15
1894	18	12	4	3	2	—	39
1895	—	13	9	1	—	2	25
1896	—	38	4	3	4	6	55
1897	—	11	1	—	5	—	17
1898	—	1	3	2	1	—	7
1899	—	110	—	5	3	—	118
1900	—	22	1	3	—	—	26
1901	—	—	15	2	3	1	21
1902	—	—	1	11	1	—	13
1903	—	5	23	—	—	—	28
Total of 14 years.	18	258	69	41	25	12	423
Average of 14 years	1	18	5	3	2	1	30
1904	—	14	30	3	2	1	50

TABLE 64.

Deaths from Zymotic Diseases.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping- cough.	Diarrhœa.	Puerperal Fever.	Erysipelas.	TOTAL.
1890	—	1	—	—	—	—	—	1	—	2
1891	—	—	—	—	1	11	1	2	—	15
1892	—	2	—	—	—	—	1	—	—	3
1893	—	1	2	—	4	—	7	2	—	16
1894	1	—	3	1	—	1	—	1	—	7
1895	—	—	4	1	2	5	7	2	—	21
1896	—	3	4	—	3	2	2	2	—	16
1897	—	—	1	—	—	4	2	—	—	7
1898	—	—	1	—	12	3	4	—	—	20
1899	—	4	—	1	—	5	9	1	2	22
1900	—	—	1	—	—	—	6	—	—	7
1901	—	—	1	—	—	—	3	—	—	4
1902	—	—	1	1	7	2	3	—	—	14
1903	—	—	7	—	—	—	—	—	—	7
Total of 14 years	1	11	25	4	29	33	45	11	2	161
Average of 14 Years	0·07	0·8	1·8	0·3	2·1	2·3	3·2	0·8	0·14	11·5
1904	—	—	4	—	1	—	—	—	—	5

TABLE 65.

Vaccination.

		Total Births.	Vaccinated.	Died.	Removed to places known.	Postponed on Medical Certificate.	Lost sight of.	Conscientious Objections.
1896	...	185	159	19	—	4	3	—
1897	...	181	161	14	—	5	1	—
1898	...	199	153	20	—	21	3	2
1899	...	215	145	25	4	40	1	—
1900	...	210	163	27	4	11	3	2
1901	...	245	218	19	3	4	—	1
1902	...	225	178	28	3	14	—	2
Total for 7 years		1460	1177	152	14	99	11	7
1903	...	225	178	18	3	23	3	1

TABLE 66.

Home Office Table.—Annual Report of Medical Officer of Health for 1904, for the Urban District of Biddulph, Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories ... (Including Factory Laundries.)	20	2	...
Workshops ... (Including Workshop Laundries.)	96	...	...
Workplaces	...	...	...
Homeworkers' Premises	...	...	...
Total	116	2	...

3.—OTHER MATTERS.

Workshops on the Register at the end of 1904:

Total number of Workshops on Register ... 47

Besides 7 Factories.

TABLE 67.

(Staffordshire County Council Table V.)

Summary of Sanitary Work done in the Nuisance Inspector's Department during the year 1904, in the Urban District of Biddulph.

						Inspections and Observations made.	Formal Notices by Authority.	Nuisances abated after Notice.
Dwelling- Houses and Schools.	{	Foul Conditions ... ..	...	...	...	103	10	10
		Structural Defects ... ..	...	...	...	81	19	19
		Overcrowding ... ..	...	...	...	2	...	...
		Unfit for Habitation ... ..	...	...	...	...	...	...
		Lodging Houses ... ..	...	...	...	...	...	...
		Dairies and Milkshops ... ..	...	...	...	...	...	...
		Cowsheds ... ..	...	...	...	68	4	4
		Bakehouses... ..	...	...	...	36	...	...
		Slaughterhouses ... ..	...	...	...	12	...	...
		Canal Boats ... ..	...	...	...	...	...	...
		Ashpits and Privies ... ..	...	...	...	92	11	11
		Deposits of Refuse and Manure ... ..	...	...	...	5	...	...
		Water Closets ... ..	...	...	...	...	...	...
House Drainage.	{	Defective Traps ... ..	...	...	...	68	8	8
		No Disconnection .. ..	...	...	...
		Other Faults ... ..	...	...	...
		Water Supply ... ..	...	...	...	18	8	...
		Pigsties ... ..	...	...	...	40	..	...
		Animals improperly kept ... ..	...	...	...	5	...	...
		Offensive Trades .. ..	...	...	...	...	...	...
		Smoke Nuisances ... ..	...	...	...	...	...	...
Other Nuisances ... ..	...	...	...	...	...	...
TOTALS						494	60	52
								Nos.
<i>Precautions against Infectious Disease.</i>								
Lots of Infected Bedding Disinfected or Destroyed .. ..						...	...	8
Houses Disinfected after Infectious Disease ... ..						...	...	15

S. GIBSON,

Date—February 6th, 1905.

Inspector.

BIDDULPH URBAN DISTRICT.

Note.—The matter found on pages 3 and 4, and 7 to 20 inclusive, is to be considered an integral part of this Report.

Area.—Unchanged. 5,057 acres.

Population.—The estimate is 6,525 for 1904. See paragraph on page 8.

Tables.—See paragraph on page 7. The “average” birth-rate changes from 34·3 to 34·1; and the “average” death-rate from 16·1 to 15·5. The “average” infant mortality figure changes from 140 to 132; and the average zymotic death-rate from 1·9 to 2·0. The averages benefit by the disappearance of 1893, which was a bad year, from Table 56; and we have an improved standard by which to measure our present position. This, for 1904, approaches closely to the average.

Births.—(See Table 61). The number registered was 117 males and 98 females, total 215. This is above the average number, but is less than in any of the preceding three years. The Rate falls to 33·0, (as variation in population is allowed for), which is the lowest in Table 56 except 1894, 1896, and 1897; and is 1·1 below the average. The birth-rate for England and Wales for 1904 was 27·9.

Illegitimate Infants.—These numbered 7, or 3·2 per cent. of all births; practically the same as in each of the two preceding years. There were 2 deaths of illegitimate infants, or 29 per cent.; whilst 30 deaths among 208 legitimate infants is only 14 per cent.; (though this is itself too high).

Deaths.—(See Tables 56, 58, and 60). The number actually registered in the District was 98; of which 1 is discarded as belonging to Congleton; on the other hand 2 are included which occurred in the Union Workhouse at Leek; the net total therefore is 99, and includes 57 males and 42 females. This number is 6 above the average. The Rate is 15·2, which is 0·3 below the average. The Rate for England and Wales for 1904 is 16·2. The deaths are mainly due to respiratory diseases, and to causes peculiar to infancy and old age.

The seasonal distribution of the deaths, and the gradual building up of the Rate, are shown thus :—

		No. of deaths.		Actual Rate.
January	...	13	...	1.99238
February	...	12	...	1.83912
March	...	4	...	0.61304
April	...	7	...	1.07282
May	...	10	...	1.53260
June	...	7	...	1.07282
July	...	8	...	1.22608
August	...	11	...	1.68586
September	...	2	...	0.30652
October	...	7	...	1.07282
November	...	8	...	1.22608
December	...	10	...	1.53260
	Total	99	...	15.17274

Uncertified Deaths.—None.

Coroner's Inquests.—Only 3 were held during 1904; of which one was on a person belonging to Congleton, who died suddenly from heart disease. The others were on a boy of 13 years, who was accidentally run over by a cart; and on another boy of the same age, from peritonitis following a kick accidentally received from a horse.

Infantile Mortality.—32 of the deaths were those of infants under one year. Compared with 215 births, this is as 149 to 1000; and this is 17 above the average, and forms a regrettable feature of this Report. 20 of them were due to causes inherited at birth; 9 certainly were due to causes which could have been prevented, and therefore represent a needless waste. The large number of infants born without enough vitality to maintain existence more than a few days or weeks is a serious problem. See remarks on pages 16 and 17. The figure for England and Wales for 1904 was 146; so that on the average Biddulph is a little on the right side; still the figure is too high, and ought to be reduced.

Mortality among Old People.—27 deaths in 99 is practically 27 per cent.; a slightly lower proportion than in some of my other Districts.

Notifications of Infectious Disease.—(Tables 57 and 63). These were 50; and 48 were serious cases, 4 deaths, from diphtheria, occurred among 30 cases notified; the other cases were 14 of scarlet fever, 3 of enteric fever, 1 of puerperal fever, and 2 of erysipelas. The average annual number is only 30; and the increase is due entirely to the diphtheria cases.

Deaths from Zymotic Diseases.—These were only 5; 1

from measles and 4 from diphtheria. The average (Table 64) is 11·5, so that in this matter 1904 stands well; and in fact has not been beaten in 14 years except in 1890, 1892, and 1901. The Rate is 0·8; compared with an average of 1·96. With the exception of the 1 case of measles, we have now a period of two years, during which no death has occurred from any zymotic disease save diphtheria; which throws into greater prominence the most unfortunate and persistent occurrence of this last-named disease.

Small-pox.—In 1902 there were 21 cases in 12 Districts in the County; in 1903 there were 223 cases in 32 Districts; with 9 deaths in 4 Districts. Biddulph escaped, as also in 1904.

Vaccination.—(Table 65). In 1903, 178 children were vaccinated out of 207 surviving, or 86 per cent.; whilst if cases medically postponed, (an unusually large number), and those removed and traced, were ultimately vaccinated in the same proportion, (which I see no reason to doubt), the percentage becomes 98; which maintains the high standard of the previous 7 years; and largely explains the District's immunity from small-pox.

Measles.—One death in November, when there was a considerable prevalence on Biddulph Moor. Little more is known of it.

Scarlet Fever.—14 cases were notified, with no deaths. 1 occurred in March, 3 in April, 1 in May, 1 in June, 3 in September, 1 in October, and 4 in December. Only 10 houses were affected; and there was no proof of connection between any of them. Neither could the origin of the cases be definitely ascertained. None of them were removed to hospital; and consequently there could not be any "return cases."

Diphtheria.—As I said of 1903, so I must say again of 1904, "this is the one disease which has been prevalent; and which "has been fatal." But whereas 1903 had 23 cases, and 7 deaths; 1904 has 30 cases, but only 4 deaths; and whilst in 1903 14 cases were removed to hospital, in 1904 24 cases were so removed. 2 died in hospital, out of 24; 2 died at home out of 6; or 8 per cent. and 33 per cent. respectively.

In April 2 cases occurred at The Woodlands; and a baby at Welsh Row died. In May there were 7 cases, in 4 houses, in Newpool Terrace, of which 6 were removed to hospital. All recovered.

In September a fresh outbreak occurred; consisting of 9 cases at New Buildings, in 3 houses, and 1 case at Chain Cottages. Of these 8 were removed to hospital, and 1 died; 2 remained at home, and 1 died. In October there were 3 cases

in the next house at Chain Cottages, 3 at New Buildings (of which 2 were in infected houses), 1 at Biddulph Crossing, and 2 in Bradley Green; in November 1 at New Buildings; of these 9 were removed to hospital and 1 died; 1 remained at home. The last case but one occurred on October 24th, the last on November 26th (died December 3rd), so there is hope that the District is free again at the end of the year. A special report was made to the Local Government Board on November 5th, 1904, on the circumstances up to that date.

It will be observed that both outbreaks were (practically) confined to the extreme southern edge of the District, where Biddulph, Smallthorne, and Kidsgrove, meet together; and I am not merely "of opinion," but I am **morally certain**, from local investigations again made, that Biddulph, throughout 1903 and 1904, received successive infections from its neighbours.

See Article on page 14, embodying the views of Dr. Cobbett. If, as he maintains, infection is due solely to personal contact, it enhances the importance of the fact that children from all three Districts mingle freely in the Brindley Ford Board Schools, which are in the Smallthorne Urban District.

Whooping-cough.—No deaths; no information.

Enteric Fever.—3 cases notified; all recovered. The patients were a girl of 12 years in September, and two boys (brothers) of 12 and 15 years in November.

Diarrhœa.—No deaths.

Cholera.—Unknown.

Erysipelas.—2 cases. No deaths. Entirely unimportant.

Puerperal Fever.—One case; recovered. This is only the second case in eight years.

The Midwives' Act, 1902.—The procedure in different Counties appears to vary considerably. Up to the present I have no information of the procedure decided upon for Staffordshire. It is however fairly obvious that it is not intended to make use of the District Medical Officers of Health, (as is to be done in Cheshire); though if Biddulph retains its practical immunity from the disease, the question is of no great importance.

Influenza.—No deaths.

Diseases of the Respiratory Organs.—26 deaths; Rate 3·98. This is a somewhat high Rate; and is the same as in the two preceding years.

Phthisis.—9 deaths, (besides 2 from tubercular disease in babies under one year). The ages at death varied from 22 to 61 years with an average of 43. This is higher than usual. The Rate is 1·38.

Cancer.—2 deaths; both females; ages 59 and 78 years. The average number of deaths in the preceding 5 years was 7.

Alcoholism.—Not named.

Accidents.—See “Inquests,” above.

Isolation and Disinfection.—The hospital has received 24 cases of diphtheria during 1904, and therefore has been of great service. In all other respects things remain as they were, and I have nothing to add to my last Report.

School Closure.—No orders have been issued, but in a few instances voluntary closing has taken place; thus Biddulph Moor Schools were closed from October 26th to November 30th on account of measles.

Insanitary Dwellings and Overcrowding.—Numerous inspections have been made. Several flagrant cases have been reported to the Council, which it is not worth while to quote in detail, because of the existence of circumstances which have been often previously alluded to, viz.: the inadequate supply of cottages. Insanitary conditions are being vigorously dealt with by the Council; and in some cases extensive alterations and repairs are being carried out. Overcrowding however remains a permanent difficulty.

Excrement and Refuse Disposal.—The “Congleton Peat Pail” continues to give every satisfaction. It has been fully described in my previous Reports for 1898 and 1899. 56 new pails have been supplied during the year, bringing up the number in use to about 577.

The scavenging is all done by the Council’s employees; and although the work increases, the Inspector reports that it is done in a satisfactory manner.

Sewage Disposal.—The Local Government Board Enquiry has been held; and subject to one or two alterations in details, of no great importance, approval is expected and awaited.

Water Supply.—See Inspector’s Report.

Slaughter-houses. } These have been visited, and supervised.
Bake-houses. }

Dairies, Cowsheds, and Milk-shops.—I continue to make inspections, from time to time, personally; and the Council has served notices under the Dairies’ Order in several instances. A distinct general improvement has taken place since inspections began to be made; but of course there are still plenty of cases where further improvement is desirable, and is by no means difficult to carry out.

Common Lodging-houses.—None.

Canal Boats.—No canal.

Factories and Workshops.—These have been visited in the course of systematic inspections. The list (given in detail in last year's Report) shows that the Act only applies to a very limited extent in this District.

The Public Health Acts Amendment Act, 1890, has been adopted; but no standard has to my knowledge been fixed by the Council relating to Section 22. The amount of accommodation enforced has been that which has seemed necessary in each case.

Systematic Inspections.—These are difficult to make, because of the scattered nature of the outlying population; and because of my residing at some distance. As regards Bradley Green, the principal centre, I think I may say that it receives a good share of systematic inspection; and as to the outlying parts, no summer passes without my spending one or more whole days in nothing else but this kind of work; of course accompanied by the Inspector, without whose local knowledge I should waste much time. And all the year round I am continually dealing with cases reported to me by the Inspector, who may be said to make, on our joint behalf, systematic inspections nearly every day throughout the year.

Anthrax.—Cases of anthrax occurred twice; and were dealt with in the usual way by the County Police; viz.: by cremation of the carcasses.

Conclusion.—I have endeavoured to make my Report as short as possible, consistently with the inclusion of all information which ought to be given.

T. W. H. GARSTANG,

D.P.H., Vict.

February 9th, 1905.

INSPECTOR'S REPORT.

Scavenging.—The work in this Department continues to increase, but owing to systematic collections by the Council's workmen, there are no complaints received.

Peat Pail System.—56 Pails have been added during the year; in most cases these replace galvanized pans, or where old and defective cesspools have been removed.

Sewers and Drains.—Several lengths of new Sewers have been laid in the District, including Brown Lees, Biddulph Moor, and Bradley Green; and by inserting manholes, and lampholes, the old Sewers are now in much better working order.

Water Supply.—Owing to the dry summer, the District has not been over supplied with water, this refers particularly to Brown Lees, which is now almost wholly supplied from Biddulph Moor.

Dairies and Cowsheds.—The usual lime-washing notices have been distributed to each Cow-keeper, and in every case where an inspection has been made, the notices have been carried out—these, with many structural improvements, are making the Cowsheds in this District very much better.

Slaughter and Bake-houses.—These may be considered fairly satisfactory; 1 Slaughter-house has been pronounced unfit and formal notice served, and 1 Bake-house has been closed.

Factories and Workshops.—These have been inspected and have been found to be generally satisfactory. The owners and tenants in all cases have remedied any defects when pointed out, and thereby removing the necessity for the serving of notices.

S. GIBSON.

February 6th, 1905.

Knutsford Urban District.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1904.

Population at Census, 1891, 4,663.

(4,266 exclusive of Workhouse and Gaol).

Population at Census, 1901, 5,172.

(4,686 exclusive of strangers in Public Institutions).

Increase, 420.

Estimated Population in middle of 1904, 5,639.

(4,850 exclusive of strangers).

Area of District in Acres (exclusive of area covered by water) $1,760 - 42 = 1,718$.

Number of Inhabited Houses, 966.	} At Census of
Average Number of Persons per House, 4.85.		1901.

Institutions within the District receiving sick and infirm persons from outside the District: H.M. Prison. Union Workhouse.

Institutions outside the District receiving sick and infirm persons from the District: Hospital for Infectious Diseases at Baguley.

Other Institutions, the deaths in which have been distributed among the several localities in the District: None.

Workhouse (Bucklow Union). Situated in this District.

Birth Rate per 1,000 living, 26.6.

Death Rate per 1,000 living, 16.3.

Death Rate from Seven Principal Zymotic Diseases, 1.0.

Deaths under one year in proportion to 1,000 Births, 139.

Each birth or death contributes to the Rate 0.20618.

TABLE 68.

(Local Government Board Table I.)

Vital Statistics of Whole District during 1904 and Previous Years.

Name of District, KNUTSFORD (URBAN).

YEAR.	Population estimated to Middle of each Year.		BIRTHS.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.					
	1	2		3	4	Under 1 Year.		At all Ages.				9	10	11	12	13	
		Gross Population including Workhouse and Gaol.	Nett Population excluding Workhouse and Gaol.			Number.	Rate.	Number.									Rate per 1000 Births registered.	Number.	Rate.
1894	4769	4392	...	...	16	...	...	...	NO RECORDS	...	...	...	63	14.3
1895	4963	4434	148	33.4	14	92	100	...	40	34	...	...	65	14.6	
1896	5057	4476	121	27.0	20	165	118	...	48	41	...	...	77	17.2	
1897	5115	4518	140	31.0	24	171	103	...	32	26	...	...	77	17.0	
1898	5148	4560	126	27.6	25	198	127	...	49	43	...	...	84	18.4	
1899	5150	4602	103	22.4	14	136	133	...	57	50	...	...	84	18.2	
1900	5148	4644	130	28.0	17	131	154	...	88	76	...	...	82	17.7	
1901	5172	4686	124	26.4	14	113	131	...	68	61	...	...	70	14.9	
1902	5306	4738	126	26.6	8	63	103	...	53	48	3	...	58	12.2			
1903	5512	4780	137	28.7	21	153	126	...	70	63	1	...	71	14.8			
Averages for years 1894-1903	5148	4583	128	27.9	17	136	122	...	56	49	...	...	73	15.9	
1904	5639	4850	129	26.6	18	139	128	...	57	49	...	...	79	16.3	

TABLE 69.—(Local Government Board Table II.)
 Vital Statistics of separate Localities in 1904 and previous Years.
 Name of District, **KNUTSFORD (URBAN).**

NAMES OF LOCALITIES.	1.—URBAN DISTRICT.				2.—UNION WORKHOUSE.				3.—H.M. PRISON.				4.—TOTALS.			
	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
YEAR.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1894	4392	..	63	16	200	..	..	..	177	..	..	..	4769	..	..	..
1895	4434	148	60	14	213	14	6	..	316	1	..	..	4963	163	66	14
1896	4476	120	70	20	235	9	7	..	346	..	..	..	5057	129	77	20
1897	4518	140	71	24	229	9	6	..	368	2	..	..	5115	151	77	24
1898	4560	125	78	25	247	7	6	..	341	..	..	..	5148	132	84	25
1899	4602	95	77	14	270	9	7	..	278	3	..	..	5150	107	84	14
1900	4644	130	70	17	274	7	12	..	230	2	..	..	5148	139	82	17
1901	4622	124	63	13	288	6	7	1	262	2	..	..	5172	132	70	14
1902	4660	126	53	8	280	10	5	..	366	1	..	..	5306	137	58	8
1903	4746	137	64	21	318	8	7	..	448	..	..	..	5512	145	71	21
Averages of years 1894 to 1903.	4580	127	67	17	255	9	7	..	313	1	..	..	5148	137	74	17
1904	4816	127	71	17	353	15	8	1	470	..	..	..	5639	142	79	18

TABLE 70.—(Local Government Board Table III.)

Cases of Infectious Disease notified during the Year 1904.

Name of District, KNUTSFORD (URBAN).

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.			NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.		
	At all Ages.	At Ages—Years.						URBAN DISTRICT.	UNION WORK-HOUSE.	H. M. PRISON.	URBAN DISTRICT.	UNION WORK-HOUSE.	H. M. PRISON.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.						
Small-pox ...	2	..	..	..	2	..	1	1	..	..	1	..
Cholera ...	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ...	7	..	3	1	3	..	7	..	..	..	..	..
Membranous Croup	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ...	3	..	1	1	1	..	3	..	..	..	..	..
Scarlet Fever	2	..	..	1	1	..	2	..	..	..	..	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	1	..	..	..	1	..	1	..	..	..	..	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	2	..	..	..	2	..	2	..	..	..	..	..
Plague ...	..	..	..	..	..	..	..	..	..	..	..	..
Totals ...	17	..	4	3	10	..	16	1	..	3	1	..	

TABLE 71.

(Local Government Board Table IV.)

Causes of, and Ages at, Death during Year 1904.

Name of District, KNUTSFORD (URBAN).

CAUSES OF DEATH. I	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Re- sidents" belonging to Lo- calities, whether occurring in or beyond the District.			Total Deaths whether of "Residents" or non "Residents" in Public Institu- tions in the District. 12
	2 All Ages.	3 Under 1.	4 1 and under 5.	5 5 and under 15.	6 15 and under 25.	7 25 and under 65.	8 65 and upwards.	9 URBAN DISTRICT	10 UNION WORK- HOUSE.	11 H.M. PRISON.	
Small-pox	1	...	...	...	...	1	...	1	...	...	...
Measles ... ..	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever ... ..	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough... ..	1	...	1	..	...	...	...	1	...	..	...
Diphtheria and Membran- ous Croup ... ..	...	...	...	...	...	...	...	...	...	...	...
Croup	4	...	2	2	...	...	...	4	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...	...	...	...
{ Enteric	1	...	...	...	...	1	...	1	..	...	...
{ Other continued...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza ... ..	...	...	...	...	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...	..	..	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea	2	2	...	...	...	...	...	2	..	...	...
Enteritis ... ..	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	1	...	...	...	...	1	...	1	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...
Phthisis	3	...	...	...	...	3	...	2	1	...	2
Other Tubercular Diseases	1	...	...	...	...	1	...	1	...	...	2
Cancer, Malignant Disease	1	...	...	...	...	1	..	1	...	...	2
Bronchitis	5	2	...	...	...	...	3	5	...	...	...
Pneumonia	1	...	1	...	...	...	...	1	...	...	1
Pleurisy ... ..	...	...	...	...	...	...	...	...	...	...	1
Other Diseases of Respira- tory Organs	3	...	...	...	...	2	1	3	...	...	1
Alcoholism	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver }	2	...	...	...	...	2	...	2	...	...	1
Venereal Diseases	1	1	...	...	...	...	...	1	...	...	1
Premature Birth	3	3	...	..	...	...	...	3	...	...	..
Diseases and Accidents of Parturition	1	...	..	...	...	1	...	1	...	...	...
Heart Diseases	8	...	...	1	1	4	2	8	...	...	1
Accidents	3	...	...	...	..	2	1	2	1	...	2
Suicides ... ..	...	...	...	...	...	...	...	...	...	...	1
Debility, &c.	6	6	...	...	...	...	...	5	1	...	4
Convulsions, &c.	4	4	...	...	...	...	...	4	...	...	...
Old Age	9	...	...	...	...	...	9	4	5	...	23
Cerebral Diseases... ..	11	...	...	1	...	5	5	11	...	...	9
All other causes	7	..	1	...	...	4	2	7	...	...	6
All causes	79	18	5	4	1	28	23	71	8	...	57

TABLE 72.

Shewing Births, Birth-rate, Deaths, and General and Zymotic Death-rates, and compared with average of last 10 years; and Deaths in Old Age and Infancy, and percentage of these to Total Deaths; for the Year 1904.

TOTAL.			BIRTH RATE.		DEATH RATE.				DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.	
Births.	Deaths	Zymotic Deaths.	Average.	1904.	General.		Zymotic.		At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.
					Average.	1904.	Average.	1904.				
129	79	5	27.9	26.6	15.9	16.3	2.0	1.0	23	18	29	23

TABLE 73.

Shewing Deaths, Death-rates, Deaths from Special Diseases, and Old Age and Infantile Deaths, in the Four Quarters of the Year, 1904.

QUARTER ENDING.	Total Deaths.	Rate.	DEATHS.		PERCENTAGE TO TOTAL DEATHS OF DEATHS.		Small-pox.	Whooping Cough.	Enteric Fever.	Diarrhoea.	ZYMOTIC DEATHS.		Phthisis.
			At 65 Years and upwards.	Under One Year.	At 65 Years and upwards.	Under One Year.					Total.	Rate.	
March 31	24	19.9	11	4	46	17	0	0	0	0	0	—	0
June 30	20	16.6	7	3	35	15	1	0	0	0	1	0.8	0
Sept. 30	10	8.2	2	2	20	20	0	0	0	1	1	0.8	1
Dec. 31	25	20.5	3	9	12	36	0	1	1	1	3	2.5	2

TABLE 74.

Births.

	M.	F.	Total.	Rate.	Of which Illegit.			Additional in Workhouse & Gaol.								
								Illegit.						Illegit.		
					M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1st Quarter ...	16	25	41	34·0	1	1	2	2	0	2	2	0	2			
2nd „ ...	15	16	31	25·7	1	2	3	1	1	2	1	1	2			
3rd „ ...	9	13	22	18·1	0	1	1	2	1	3	2	1	3			
4th „ ...	19	16	35	28·7	1	1	2	3	2	5	3	2	5			
	59	70	129	26·6	3	5	8	8	4	12	8	4	12			

TABLE 75.

Shewing position of Knutsford in the County in 1903, compared with 34 other Urban Districts.

	Best of 35 Urban Districts	Worst of 35 Urban Districts	Knutsford Figures.	Place of Knutsford in the List.
Birth Rate	38·8	13·6	28·7	13
Death Rate	6·6	19·2	14·8	26
Zymotic Death Rate	0·0	2·8	1·2	22
Infantile Mortality	25	200	153	29

TABLE 76.

Notifications of Infectious Diseases.

(No records prior to 1895).

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Cholera.	Erysipelas.	TOTAL.
1895	—	17	—	1	—	—	3	21
1896	—	5	—	—	—	—	6	11
1897	—	2	—	—	—	—	1	3
1898	—	—	1	2	—	—	2	5
1899	—	62	—	3	1	—	2	68
1900	—	3	7	2	1	—	1	14
1901	—	7	5	2	—	—	1	15
1902	—	2	3	—	1	—	2	8
1903	4	7	6	1	1	—	6	25
Total of 9 years.	4	105	22	11	4	—	24	170
Average of 9 years	0·4	11·7	2·4	1·2	0·4	—	2·6	18·8
1904	2	2	7	1	2	—	3	17

TABLE 77.

Deaths from Zymotic Diseases.

Year.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping- cough.	Enteric Fever.	Diarrhoea.	TOTAL.
1890	—	—	—	—	—	—	—	—
1891	—	1	—	—	—	—	1	2
1892	—	6	1	—	3	—	—	10
1893	—	—	2	—	—	—	1	3
1894	—	—	—	—	—	—	—	—
1895	—	—	—	—	—	2	—	2
1896	—	—	—	—	3	—	3	6
1897	—	1	—	—	—	—	8	9
1898	—	—	—	—	—	—	10	10
1899	—	—	—	—	2	1	1	4
1900	—	—	—	2	—	2	3	7
1901	—	—	—	2	2	—	3	7
1902	—	3	—	—	—	—	—	3
1903	—	—	—	1	2	—	3	6
Total of 14 years	—	11	3	5	12	5	33	69
Average of 14 Years	—	0·8	0·2	0·4	0·9	0·4	2·4	5
1904	1	—	—	—	1	1	2	5

KNUTSFORD URBAN DISTRICT.

Note.—The matter found on pages 3 and 4, and 7 to 20 inclusive, is to be considered an integral part of this Report.

Area.—Unchanged.

Population.—This is estimated at 5,639 gross. (See paragraph on page 8). It was 5,172 at the Census. From this must be deducted the inmates of the Gaol and Workhouse, 470 and 353 respectively, leaving 4,816. To this however we again add 34 (the number of officers resident in the Workhouse, 18, plus the number of pauper inmates belonging to Knutsford, 16) giving a corrected population of 4,850 as the true number among which the births and deaths are to be considered as belonging to the Knutsford Urban District. I have again to thank the Governor of the Gaol, and the Master of the Workhouse, for their courtesy in giving me the information I asked for.

The other occupants of the two Public Institutions are strangers, temporarily sojourning in the District, owing to circumstances over which they have no control. Very few births, and an unusually large number of deaths, occur among them. I follow my usual course of excluding all these numbers. For instance, in the death-rate I recognise 79 deaths in this population of 4,850, which gives a Rate of 16·3. If I were to take the full number of 128 deaths in the total population of 5,639, I should get a Rate of 22·7,—and it would be an obvious injustice of the District to put any such figures on record. I make a point of informing the Medical Officers of Health for other Districts of all deaths belonging to them which occur within my District; and so feel doubly justified in discarding them. It is a great pity that such inter-notification is not made general and compulsory.

Tables.—4,850 will therefore be found in Table 68, and 4,816 in Division 1 of Table 69. The discrepancy is apparent only; and is explained above.

In Table 69 the births registered are gross numbers in each “col. *b*”; but the deaths in “cols. *c* and *d*” are “corrected” by omission of those not belonging to the District.

(See paragraph on page 7). The “average” birth-rate changes from 27·8 to 27·9; and the “average” death-rate from 16·1 to 15·9. The “average” infant mortality figure changes from 134 to 136; and the “average” zymotic death-rate remains at 2·0.

Many of the columns have hitherto been imperfect, as accurate statistics can only be given from the formation of the District in 1895; but after this year (1904) is added to the records, there will be full information on which in future to base "ten-year" averages.

The other Tables sufficiently explain themselves; and will (I hope) be found to give all the information, in a handy form, that it is possible to present in this shape.

Births.—(See Table 74). The births registered were 141, 12 of which occurred in Public Institutions, and do not belong to the Knutsford Urban District at all. 141 births, in a population of 5,639 would give a fallacious Rate of 25·0; whereas 129 births, in a population of 4,850, gives the true Rate of 26·6. The difference here is not so great as in the case of the death-rate; and I explain my procedure in detail in order to justify the decision at which I have arrived.

Table 68 shows 129 to be just the average; so that with an increasing population there is a slowly diminishing birth-rate. The average of England and Wales for 1904 was 27·9; which is identical with the Knutsford average for 9 years past; and the Rate of 26·6 for 1904 is the lowest but two in the Table.

Deaths.—(See Tables 68, 69, and 73). The total number registered was 127; of these 70 occurred in the District, 2 in the Gaol, and 55 in the Workhouse; 2 of the deaths occurring in the District are discarded as belonging to Walkden and Weaverham; and 2 in the Gaol and 47 in the Workhouse are also discarded, as belonging to Altrincham (15), Bucklow Rural (14), Sale (8), Wilmslow (6), Lymm (1), Hale (1), Manchester (1), and unknown (3). This is a much less complicated list than I have had on some previous occasions to deal with. Each case, (except the three unknown), was notified *at the time it occurred* to the Medical Officer of Health of the District it belonged to. To the 68 (net) deaths in the District, and 8 in the Workhouse belonging to the District, I then have to add 1 which occurred at Ashton-on-Mersey, and 2 which occurred in the Rural District; and so get the final total of 79. This gives a Rate of 16·3, which is 0·4 above the ten-years' average. As shown in Table 1, it compares unfavourably with all my other Districts except one; and Table 2 indicates that it is mainly attributable to miscellaneous causes (3·5), old age (3·3), infancy (2·9), respiratory diseases (1·9), heart disease (1·6), and zymotic diseases (1·0); these causes accounting for 14·2 out of the whole.

The seasonal distribution of the deaths, and the building up of the Rate, are shown thus:—

	No. of deaths.	Actual Rate.
January	8	1·64944
February	8	1·64944
March	8	1·64944
April	6	1·23708
May	10	2·06180
June	4	0·82472
July	2	0·41236
August	2	0·41236
September	6	1·23708
October	9	1·85562
November	9	1·85562
December	7	1·44326
Total	79	16·28822

The death-rate for England and Wales for 1904 was 16·2.

Uncertified Deaths.—None. (None since 1900).

Coroner's Inquests.—4 inquests were held in the District proper. January 18th, M., 15 years, syncope due to overlaid stomach; February 7th, M., 83 years, shock due to internal injuries from a fall; July 17th, M., 33 years, peritonitis from perforation of intestine, thrown out of a trap; August 23rd, F., 45 years, found dead, syncope, alcoholism. One was held at the Workhouse, May 16th, M., 33 years., injury to spine, thrown from horse. There were also 3 inquests held in the Workhouse, and 2 in the Gaol, which do not concern this District.

Infantile Mortality.—(Table 68). 18 deaths of children occurred under one year of age; which in proportion to 129 births is as 139 to 1000. This figure, 139, is only 3 above the average, and is below the figure (146) for England and Wales for 1904; nevertheless it is too high; (see general remarks on page 17). 9 of the deaths were due to prematurity, debility at birth, &c.; 2 to diarrhœa, 2 to bronchitis, 4 to convulsions, and 1 to venereal disease. These deaths form 23 per cent. of all deaths, as against 30, 14, and 20 per cent. in the 3 years preceding.

Comparative Position.—(Table 75). The year 1903 showed a great falling off, compared with 1902, which latter will probably continue for some time to be our "record" year. The place of Knutsford in the list of 35 Urban Districts in Cheshire, beginning with 1896, has roughly been, 22, 18, 26, 22, 18, 16, 11, 22. I have not much hope that 1904 will show any great improvement.

Illegitimate Infants.—(Table 74). There were 8 illegitimate births among 129, or 6 per cent., against 8 and 5 per cent. in the

two years preceding. Only 1 of these children died, or 12 per cent.; whilst 17 died among 121 legitimate children, or 14 per cent.

Mortality among Old People.—23 deaths, or 29 per cent. of all deaths. It was 27, 34, and 36 per cent. in the three years preceding; which gives a high average. There is no doubt this is due to peculiarities in the age-distribution of the population, which always contains an excess of persons in advanced life.

Notifications of Infectious Diseases.—(Tables 70, and 76). Of these there were only 17, of which all occurred in the District proper, except one (in the Workhouse). The total is just below the average; but included some unusually severe cases.

Deaths from Zymotic Diseases.—(Table 77). Total 5, just equal to the average. Rate practically 1·0. These will be noticed in detail, below.

Small-pox.—On June 9th a case was notified in the Market Place, a woman aged 34 years. The illness had commenced on the 4th, and the rash had appeared on the 7th. For six days therefore a man who lived with her, and a number of female neighbours who went freely in and out, were exposed to infection. The patient was removed to the Joint Board's Hospital, on the 9th; the bedding burnt; the house disinfected and locked up; and contacts re-vaccinated as far as they were willing. No further case occurred; which seems very surprising; nor was the origin of the infection ever ascertained. The patient had two scars of infantile vaccination, (area $\frac{5}{8}$ ths of a square inch,) nevertheless the rash was copious, and became confluent. She was six months pregnant; abortion took place early on the 14th, and she died from exhaustion the same night. The body was cremated at the Manchester Crematorium.

On July 14th a case occurred in the Workhouse, a man 61 years of age, who was employed as assistant in the tramp-ward, which suggests the source of infection. He was removed to hospital the same day. He had 2 marks of infantile vaccination, (area $\frac{1}{6}$ th of a square inch); his rash was semi-confluent in places (such as the face), but he ultimately did well, and was discharged cured on September 3rd.

Vaccination.—The Urban District forms, by population, nearly two-thirds of the Knutsford Registration Sub-District of the Bucklow Union. For this combined area the vaccination returns for eight years, 1896–1903, are given in the preceding Report for the Bucklow Rural District; to which reference should be made. (See Table 45, page 74). From this it appears that in 1903 (not 1904), 197 children were vaccinated,

out of 200 surviving; 1 being postponed on medical certificate. This is very close on 100 per cent.

Chicken-pox.—No information.

Measles.—Not prevalent.

Scarlet Fever.—Only 2 cases occurred, and there were no deaths. One was in January, and the other in April. The second case was removed to hospital and remained there five weeks; the resident Medical Officer placing it in an isolation ward and considering it to be really measles.

Diphtheria.—7 cases were notified, but most of them were slight, and only 1 was removed to hospital. 1 occurred in February, 1 in March, 3 in July, 1 in September, and 1 in October. There were no deaths.

In connection with this subject it is interesting to note that a child of 17 months died of "laryngeal croup" on March 11th; one of 5 years from "croup and heart failure" on April 30th; one of 17 months from "acute laryngitis and exhaustion" on May 5th; one of 3 years from "croup and syncope" on May 22nd; and one of 5 years from "croup and syncope" on May 25th. One cannot avoid a suspicion that possibly some or all of these cases may have been diphtheritic, and that there may have been other slight cases which were not recognised.

Whooping-cough.—Prevalent to some extent at the close of the year. One death in December. No other information obtainable.

Enteric Fever.—One case notified in October. Bacteriological examinations were twice negative in result. The case proved fatal at the end of three weeks. A previous case had occurred in the same house in August, 1901. Nothing definite was ascertained about it. There have been only 12 cases in 10 years; and only 6 deaths in 15 years.

Diarrhœa.—Only 2 deaths, in August and October; both children under one year. Table 77 shows that the District as a rule suffers very little from this disease; only 35 deaths having occurred in 15 years.

Influenza.—No deaths; no information.

Puerperal Fever.—Tables 70 and 71 show 2 cases notified, and 1 death. There were really 3 cases with 2 deaths. On October 23rd a woman died, after childbirth (in which she was attended by a midwife), death being ascribed by the medical man called in to pneumonia. On October 26th a woman died from puerperal fever (in the practice of the same midwife), so diagnosed and certified by the same medical man; and a third case occurred in his practice, (nursed by the same midwife),

which ultimately recovered. He then, looking back to the first case, came to the conclusion that that had also been puerperal fever, with the symptoms masked by the more urgent pneumonia. The Council ordered the whole circumstances to be reported to the County Council; and on November 14th the County Medical Officer of Health, accompanied by myself, made a searching investigation into the circumstances. The midwife, who had been in practice for many years, was found to be very deficient in knowledge of modern safe-guards; but as she had obviously acted in ignorance rather than in carelessness, it was not thought desirable to take any further steps with regard to her, beyond a strong caution, that as a precisely similar "accident" had happened to her a few years before, the next occasion (if it ever arose) would see her name removed from the Register.

Looking back through my file of Reports I find that in July, 1899, I reported both to the Bucklow Rural Council and to the Knutsford Urban Council as follows:—"Although the disease "is thus shown to be rare in this neighbourhood, I cannot let "the unfortunate result pass into oblivion without uttering a "warning to the public that the *risk is always present*, and that "those who entrust cases of child-birth to midwives, however "honest both sides may be, must expect to have occasionally to "*make payment in human life.*"

It is needless to add that the warning was wasted; and will be so, now, again.

Erysipelas.—3 cases notified; no deaths. All the cases were unimportant.

Phthisis.—3 deaths registered, 2 males and 1 female, at ages 27, 37 and 41 years. Rate 0·6. In the last six years the total number of deaths has been 20. Only one notification however has been received; and that was in 1901, and is not included in the deaths.

Other Tubercular Diseases.—One death, from tubercular ulceration of the rectum; M., 47 years.

Cancer.—Only 1 death; F., 54 years; organ affected, breast. In the last six years the total number of deaths has been 20. Rate 0·2.

Bronchitis, Pneumonia, &c.—9 deaths; Rate 1·9. (11 per cent. of all deaths).

Alcoholism.—2 deaths, M., 55 years, and F., 45 years.

Venereal Diseases.—These, as cause of death, generally show themselves in the offspring of diseased parents. The death recorded in Table 71 was a child, 1 month old, from congenital syphilis.

Premature Birth. }
Diseases of Parturition. } Alluded to above.

Accidents.—See above : “Coroner’s Inquests.”

Heart Disease.—8 deaths ; Rate 1·7. (10 per cent. of all deaths).

Isolation Hospitals.—Two cases of small-pox were removed ; also one case of scarlet fever and one case of diphtheria. The District is well provided, through the Joint Hospital Board.

Systematic Inspection.—This has not been carried out as fully as in previous years ; partly because there appeared to be no urgency ; partly because this District has been more minutely inspected in the past than any other on which I report ; and partly owing to a regrettable accident to the Inspector, which incapacitated him from work for a considerable period, and deprived me of his assistance.

Refuse Removal, &c.—The Inspector is of opinion that a great improvement has been effected by the establishment of the scavenging department under his charge ; and also that economy has been secured.

Sewage Disposal.—The reports of examinations of the effluent by the Mersey and Irwell Joint Committee, which I have been able to obtain, are :—December 15th, 1904, “fair” ; March 22nd, 1905, “good” ; May 3rd, “unsatisfactory” ; June 14th, “fair” ; August 16th, “good.” The Inspector states that the May result was due to accidental circumstances which were only temporary. He also hopes before long to be able to construct some additional filters, in view of a probable increase in the volume of sewage to be dealt with. In my opinion a simultaneous increase in the tank accommodation is equally desirable.

Peat Pails.—Ten privies have been converted to peat-pails.

New Houses.—Building plans passed during the year include the Public Free Library, 18 dwelling-houses and 2 shops.

Factory and Workshop Act 1901.—The Inspector reports that all the workshops are in a satisfactory condition, improvements having been made during the year. Inspections have been “numerous,” written notices “none,” number of workshops 104. There is one “underground” bake-house, to which a certificate has been granted at the request of the Inspector of Factories. The Clerk and myself are of opinion that it is not an “underground” bake-house. The Home Office Table is not appended, as there is no statistical information available beyond what is here given.

Sanitary Improvements.—For the same reason, no doubt,

viz. : temporary (if somewhat prolonged) absence from work, the Inspector is unable to furnish the usual figures as to the work in his department. Schools have been visited, and found clean, and sanitary arrangements in good order. Dairies and Milkshops, Cowsheds, Bake-houses, and Slaughter-houses, are all reported clean; numerous inspections of ashpits, &c., with no complaints; numerous inspections of house-drains, many of which have been reconstructed; one lot of infected bedding destroyed; three houses disinfected after infectious disease.

In the above half-dozen paragraphs I have embodied all the information that the Inspector is able to afford; and accordingly this year there will be no separate report from him.

Water Supply.—This remains ample in quantity; and although it does not yield the best possible results on chemical analysis, yet it stands the test of experience; for no actual ill-effects have ever been attributed to its use.

The supply, with its admitted pollutions, was described in detail to the Council on December 3rd, 1895. On October 5th, 1897, the great typhoid epidemic at Maidstone necessitated a comparison; and the subject was further considered in my Annual Report for 1898. For six years there has been nothing more to say; but the occurrence of the present typhoid epidemic at Lincoln, (February, 1905) compels the repetition of the warning note of 1898. There is an undoubted element of risk in the sources of supply.

Cemetery.—Number of burials, up to 4th February, 1905, 195.

Recreation Grounds.—The District has always been extremely fortunate in the possession of the large open space, (about 50 acres), known as The Heath. In addition to this, the Council has now acquired, by negotiation with Earl Egerton of Tatton, the southern end of "The Moor," (about 5 acres), lying between the old town and the railway embankment. This has been levelled, and fenced. Trees and shrubs have been presented, and planted. In the water-logged area, excavation of one part, and consolidation of another, will, it is hoped result in the whole becoming definitely either "land" or "water." A contribution from the Freeholders' Fund will minimise the actual expenditure out of Rates.

The scheme, when completed, will be one of the greatest æsthetic improvements the District has ever known: and I think it will be found of value from a sanitary point of view also.

T. W. H. GARSTANG,

February 23rd, 1905.

D.P.H.

Bucklow Joint Hospital Board.

This is not a Report under Art. 18, (14) and (16), of the Local Government Board's Order; but is published at the suggestion of myself as Medical Adviser to the Board, and as Medical Attendant at the Small-pox Hospital, by the permission of the Board; for the information of the various Authorities which comprise it.

General Infectious Diseases, (scarlet fever, diphtheria, and enteric fever), have been freely removed to the new Baguley Sanatorium, situated within the Bucklow Rural District, and now belonging to the Manchester Corporation. The Joint Hospital Board is entitled, by agreement, to the use of 35 beds.

Table 78 shows all the details, month by month, for 1904. 5 patients died, out of 116 admitted; a percentage of 4. The percentage of deaths to cases, in the different diseases, however, varies widely, being 2 for scarlet fever, 6 for diphtheria, and 50 for enteric fever.

The latter figures however will be misleading unless it is noted that only 4 cases of enteric fever were admitted, with 2 deaths; as against 16 cases of diphtheria, with 1 death; and 96 cases of scarlet fever with 2 deaths.

17 patients remain in hospital, at the end of 1904, compared with 13 at the end of 1903.

The largest number of patients in hospital, at one time was 30, in May.

The Small-pox Hospital has been maintained in a condition of preparedness; and has been opened four times, and has received 7 patients.

All particulars will be found in Tables 79 and 80. Patient S.W. was admitted from Wilmslow; A.L. and G.J. from Knutsford. Each of these was in at a separate time. The other 4 were in simultaneously; A.I. from Ashton-on-Mersey; the others from Sale.

Two deaths occurred among the 7 patients; in the case of A.L. death was as much due to exhaustion following miscarriage, as to the severity of the small-pox; and in the case of E.P., who had met with an accident by being thrown out of a trap, previous to admission, death was mainly due to exhaustion following diffuse cellulitis in the damaged arm, in a man 74 years of age.

No extension of the disease took place among the attendants, all of whom were re-vaccinated (who had not been done already) on commencing work.

T. W. H. GARSTANG, D.P.H.,

February 25th, 1905.

Medical Adviser to the Board.

TABLE 78.

Register of Patients removed to the Baguley Sanatorium, 1904.

DATE.	DISEASE.	BUCK-LOW.			Alder-ley.			Ash-ton.			Hale.			Knuts-ford.			Sale.			Wilm-slow.			
		Admitted	Discharged	Died	Admitted.	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	
Remaining from 1903.	Scarlet Fever	4	...	...	3	...	...	...	...	...	...	...	...	...	...	...	1	...	...	4	...	...	Remaining in 13
	Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1904 JAN.	Scarlet Fever	4	2	...	2	3	...	...	...	...	...	...	...	...	...	...	1	...	...	4	...	...	Admitted 6
	Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 10
FEB.	Scarlet Fever	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	Admitted 3
	Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 2
MAR.	Scarlet Fever	2	3	...	2	...	...	...	...	3	...	...	...	...	...	3	...	...	...	...	...	...	Admitted 15
	Diphtheria	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 5
APR.	Scarlet Fever	7	3	...	1	...	...	...	...	...	1	1	...	...	...	3	...	...	1	...	...	Admitted 15	
	Diphtheria	4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 6
MAY.	Scarlet Fever	15	4	1	2	...	...	...	...	1	2	...	1	...	3	...	1	...	...	...	...	...	Admitted 19
	Diphtheria	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 15
JUNE	Scarlet Fever	3	12	...	1	...	...	...	...	2	...	...	...	...	...	2	...	...	1	...	...	Admitted 5	
	Diphtheria	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 19
JULY	Scarlet Fever	6	7	...	1	...	...	...	...	2	1	...	...	...	1	...	2	...	...	...	...	...	Admitted 10
	Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Discharged 10
																						Died 0	
																						Remaining in 16	

DATE.	DISEASE.	BUCK-LOW.			Alder-ley.			Ash-ton.			Hale.			Knuts-ford.			Sale.			Wilm-slow.			
		Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died	
AUG.	Scarlet Fever	2	5				1			1	1					1							Admitted 6
	Diphtheria	1																					Discharged 6
	Enteric Fever																						Died 0
																						Remaining in	16
SEP.	Scarlet Fever	2	7							1	4					1	1			2			Admitted 6
	Diphtheria	1	1																	1			Discharged 15
	Enteric Fever																						Died 0
																						Remaining in	7
OCT.	Scarlet Fever	2	2				1		2							6			2				Admitted 14
	Diphtheria													1									Discharged 3
	Enteric Fever																		1				Died 0
																						Remaining in	18
NOV.	Scarlet Fever	1	2				1		2	1					4	1		1					Admitted 12
	Diphtheria		1						1					1									Discharged 6
	Enteric Fever					2	1																Died 1
																						Remaining in	23
DEC.	Scarlet Fever									2					3	5		1					Admitted 5
	Diphtheria								1	1													Discharged 10
	Enteric Fever						1													2			Died 1
																						Remaining in	17
TOTALS		49	48	1	8	8	2	1	14	11	1	1	1	1	22	14	1	12	8				
		13	11	1			2	2	2	1	1	1	1				2	2					

TOTALS.			
Scarlet Fever	108	91	2
Diphtheria	16	13	1
Enteric Fever	4	2	2
	128	106	5

TABLE 79.

Cases treated in Newhall Green Small-pox Hospital.

No. in Register.	Name.	Sex.	Age	Date of Admission.	Character of Rash.	Vaccination.			Date of discharge	Date of Death.
						No. of Marks.	Area in Square Inches.	Previous Vaccination.		
10	S. W.	F	25	Apr. 25	Discrete	1	$\frac{1}{4}$	Infant	Jan. 4	...
11	A. L.	F	34	June 9	Confluent	2	$\frac{3}{8}$	"	...	June 14
12	G. J.	M	61	July 15	Semi-Confluent	2	$\frac{1}{6}$	"	Sep. 3	...
13	A. I.	F	40	Oct. 7	Discrete	2	$1\frac{1}{4}$	"	Nov. 5	...
14	H. M. W.	M	44	" 8	"	5	2	"	Nov. 2	...
15	W. E. P.	M	48	" 10	Semi-Confluent	1	$\frac{1}{2}$	"	Nov. 16	...
16	E. P.	M	74	" 12	Discrete	1	$\frac{1}{16}$	"	...	Oct. 22

TABLE 80.

Resident Staff at Small-pox Hospital.

NAME.	FROM	TO	NUMBER OF DAYS.
Nurse R.P. ...	April 25	June 7	44
Nurse E.L.L. ...	June 9	June 15	7
Nurse M.C. ...	June 11	June 25	} 119
" " ...	July 14	Sept. 12	
" " ...	Oct. 6	Nov. 17	
Nurse A.H. ...	Sept. 16	Sept. 23	8
Nurse H.L. ...	Oct. 8	Oct. 29	22
Ward-maid M.J. ...	April 25	June 7	44
" A.S. ...	June 13	June 25	} 117
" " ...	July 14	Sept. 12	
" " ...	Oct. 6	Nov. 17	
Attendant W.H. ...	April 25	June 7	} 165
" " ...	June 9	June 25	
" " ...	July 14	Sept. 12	
" " ...	Oct. 6	Nov. 17	

**Extract from Report by Dr. T. B. Rhodes,
Resident Medical Officer at the Baguley
Sanatorium.**

DIPHTHERIA.

May I take this opportunity of urging the immense necessity for the **early** administration of antitoxin, in a **sufficiently large** dose, to any case **suspected** of being Diphtheria. My own view is that in any **ordinary** case of Faucial Diphtheria— if antitoxin, 2,000 units, be administered on the **first** day of disease, or 4,000 units on the **second** day,—there is little or no danger for the child, provided always that care is taken subsequently in the matter of rest and other general treatment. If antitoxin, 4,000 or 6,000 units, is administered on the **third** day, the case will **probably** proceed to a favourable recovery—though a second dose of antitoxin may be found necessary. On the **fourth** day, as a rule, 8,000 or 10,000 units may be necessary. On the **fifth** day, it is, in my opinion, well to give a moderate dose such as 6,000 or 8,000 units first, and repeat the same six or eight hours later. On the **sixth** day the child is usually so full of toxæmia that antitoxin will hardly overtake the disease [—I regard the advisability or not of intra-venous injection of antitoxin as still **sub judice**: there is little doubt, however, that antitoxin given in this way acts more rapidly than it would do if injected subcutaneously—]; but small doses—say, 4,000 units,—given repeatedly are, I think, best in these cases. And it is certainly well to give **some** antitoxin even in the apparently hopeless cases, for who shall say whether the antitoxin may not after all overtake the disease, even against probabilities. The medical man who gives antitoxin to a case suspected of being Diphtheria, before sending the same to hospital, very often saves the life of the child by avoiding delay; and I know of at least one definite instance, during the short period of six months under consideration, where a child's life has been undoubtedly saved in this way.

I should like to add that I do not think that antitoxin **ever** does any harm. The only patients who seem to suffer much inconvenience from it are adults, who occasionally have rather severe urticarial and joint-pains, and sometimes even a definite and multiple **arthritis**. Fortunately, however most adults, unless the attack is a severe one, get over it without the necessity for antitoxin arising.

**Copy of Circular issued 25th February, 1905.
Bucklow Rural District Council.**

DEAR SIR,

DIPHTHERIA.

In consequence of certain recent deaths in the Sanatorium, of children, from diphtheria, which are stated by the Resident Medical Officer to be largely due to **delay** in (1) the administration of antitoxin and (2) removal to hospital, I am instructed by the Council to remind you that whenever you have a case which you consider **suspicious**,

- (a) You can obtain an "outfit" for a bacteriological examination, on applying to me, without charge ;
- (b) You can obtain authority, by applying to me, to purchase antitoxin, at the cost of the Council, in cases where the patients cannot afford to purchase it themselves. (N.B.—This is in substitution for the plan of keeping antitoxin at the office, which has been found inconvenient).

In view of the serious increase in the prevalence of diphtheria, I venture to hope that you will make free use of my assistance in the above matters.

PHTHISIS.

For the fourth time I remind you that the Council pays the ordinary fee for the voluntary notification of cases of phthisis ; and undertakes that there shall be **no interference** with patient, or family, or medical attendant, *except such as may be desired*.

The Inspector is willing, and anxious, to give assistance in disinfection of premises periodically, where a case of phthisis exists ; but, as I have pointed out to the Council, I can only allow this to be done where I have received notification from the medical attendant.

In suspected cases, also, bacteriological examination of sputum may be obtained, free of cost, by applying to me.

Inviting your professional and friendly co-operation, for the public benefit,

I remain, dear Sir,

Yours faithfully,

T. W. H. GARSTANG,

Medical Officer of Health.

Edge Mount, Altrincham,
February 20th, 1905.



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